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Research in allied health education indicates faculty experience varying levels of role strain between academic responsibilities and clinical practice. How athletic training (AT) faculty prioritize their work and the impact on role strain and intent to leave had not been reported previously. The purposes of this investigation were to determine the degree of role strain experienced by full-time athletic training educators affiliated with accredited entry-level programs, to identify the leading components of role strain, and to examine the relationships between personal, employment and institutional characteristics, academic role orientation, academic role strain, and intent to leave.

The study was conducted using a cross-sectional descriptive design to administer a web-based survey. A total of 250 full-time faculty members, solicited from a national database participated in this study, yielding a 26 % response rate. Respondents completed six questionnaires: personal, employment and institutional questionnaires, the Academic Role Orientation (ARO) Scale, the Academic Role Strain Scale – Athletic Training Educator (RSS-ATE) version, and a series of intent to leave questions. The ARO delineates eight work orientations emphasizing teaching, research, and/or service. The RSS-ATE contains 55-items measuring total role strain and 7 subscales: role incongruity, inter role conflict, inter-sender role conflict, intra-sender role conflict, role ambiguity, role overload, and role incompetence.

Athletic training faculty reported moderate role strain in comparison to previous reports among collegiate athletic trainers and nursing faculty. Role overload and inter-sender role conflict were the leading components of role strain. Significant relationships were found among the personal, employment, and institutional variables and role strain. Both ideal and actual role orientations as well as role orientation incongruity with supervisors, colleagues, and the institution had a significant impact on total role strain and subscale scores. Individuals with the highest total role strain scores reported a greater frequency of considering leaving their current institution, leaving the profession, and leaving higher education.

Strategies for addressing role strain, limitations of the study, and suggestions for future research are presented. Future research exploring the role strain and role orientations of athletic training faculty should be conducted to determine their relationship on other outcomes such as job satisfaction, productivity, and turnover.

A NATIONAL SURVEY OF ATHLETIC TRAINING EDUCATORS' ACADEMIC ROLE STRAIN, ROLE ORIENTATION, AND INTENT TO LEAVE

by

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To Jaychele, Sabra, and Teagan

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CHAPTER I

INTRODUCTION

Statement of the Problem

Athletic trainer education has witnessed substantial growth and change over the past decade. Credentialing, accreditation, and curricular changes have occurred repeatedly in the history of the profession. Most recently, however, the growth of the profession and the need for qualified athletic training faculty has the potential to cause significant stress. In 1997, the National Athletic Trainers' Association (NATA) Education Reform Task Force presented to the NATA Board of Directors 18 recommendations to shape and direct athletic trainer education for the future (NATA Education Task Force, 1997). Included in those recommendations were the elimination of the internship route to certification and the mandate that all NATA Board of Certification (BOC) examination candidates graduate from an accredited athletic training education program (ATEP). In the 1993 – 1994 BOC exam year, 84 institutions were accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) to sponsor entry level athletic training education programs. In contrast, 573 institutions sponsored internship candidates to challenge the BOC examination (NATA, 1996). By December 2004, the deadline mandated by the NATA and the BOC, 250 institutions had applied for candidacy to be accredited by CAAHEP. By January 2006, there were 338 programs accredited by CAAHEP to offer an entry-level degree in athletic

training (JRC-AT.org). This represents a 400 % increase in the number of entry-level programs in less than 15 years. During this same time the need for qualified athletic training educators has also increased (Fuller & Walker, 2004).

Since 1995, there have also been continued administrative, educational, and procedural changes to the preparation of entry-level athletic training students, the educational competencies and content areas, and the credentialing of athletic trainers. The NATA Education Council, another recommendation from the Education Reform Task Force, issued a significantly expanded third edition of the *Athletic Training Educational Competencies* in 1999 and the fourth edition was released in January of 2006 (NATA, 1999; NATA, 2005a). The Joint Review Committee on Educational Programs in Athletic Training (JRC-AT), a division of CAAHEP, substantially revised its *Standards and Guidelines* twice in the past decade (CAAHEP, 1999). Most recently, the JRC-AT and the NATA Board of Directors approved the decision to withdraw from affiliation with CAAHEP and to create the Commission on Accreditation of Athletic Training Education (CAATE). Effective July 1, 2006, the CAATE will now oversee self-study, site visits, annual reporting, and accreditation of all entry-level programs (CAATE, 2005). And to compound the issue, the BOC announced that effective with the 2007 exam period, the BOC examination will convert to a computer based testing format (BOC, 2005). Collectively, these reform efforts have the potential to significantly impact faculty member's perceptions of their work as athletic training educators.

Previous research examining health science educators, particularly nursing, social work, physical therapy, and medicine, indicate that academic role strain is a concern.

Within the larger body of role theory research, role strain has been defined as "the subjective state of emotional arousal in response to the external conditions of social stress" (Hardy & Hardy, 1988, p. 252). Role strain results from role stress where role obligations are vague, irritating, difficult, conflicting, or impossible to meet. Education reform factors, role orientation, and personal and employment characteristics have previously been identified as influencing faculty role stress in these disciplines (Mobily, 1987, 1991; Piscopo, 1994; Oermann, 1998; Hanna, 2000).

It is not known how education reform has impacted the stress levels of athletic training instructional faculty. Previous research indicates that athletic training (AT) faculty typically have multiple job responsibilities, began work as clinicians before entering academia, and may have difficulty balancing the demands of teaching, research, and service to meet tenure and promotion requirements while also meeting clinical demands in athletics (Sciera, 1981; Perrin & Lephart, 1988; Leard, Booth, & Johnson, 1991; Foster & Leslie, 1992; Duncan & Wright, 1992; Winterstein, 1998; Perkins & Judd, 2001; Hertel, West, Buckley & Denegar, 2001;Judd & Perkins, 2004; Ingersoll, et al., 2005). Like many other professional education programs, AT educators are asked to assume a variety of roles and responsibilities. The role demands on faculty arise from both institutional expectations to perform the duties of teacher, researcher, administrator, colleague, and clinician but also from external sources such as accrediting agencies, funding agencies, professional organizations and personal obligations. These various role demands have the potential to add considerable stress to the work lives of athletic training educators at entry-level programs. A dearth of research examining the levels of faculty

stress among AT educators from a role strain perspective can be found in the published literature. Two pilot study projects support the existence of academic role strain among athletic training educators.

Many AT educators remain within the discipline for years, yet may exhibit decreased productivity or difficulty meeting institutional demands. Others may choose to leave the profession altogether if they are unable to meet the requirements of academia due to structural impediments (resources, workload, opportunities) or as a result of individual and personal resources or coping methods. No research has examined AT faculty members' intent to leave and its relationship to academic role stress.

Additionally, the employment and institutional characteristics within athletic training education programs are highly varied. Some faculty members might carry moderate to heavy teaching loads with extensive expectations for scholarship and/or program administration, while others might have appointments that carry administrative, teaching, and clinical practice responsibilities with little emphasis on research. AT programs can be found at doctoral granting institutions, comprehensive institutions, and baccalaureate/liberal arts institutions. Some programs offer entry-level education programs only, while others offer graduate athletic training education as well. As athletic training education reform has progressed and responded to the elimination of the internship route to certification by the BOC, many institutions pursued accreditation without realizing the financial, personnel, and institutional resource needs. This variety in faculty positions and responsibilities as well as the variations in institution types should be examined.

Finally, no published research could be found that examined the academic role orientations of athletic training faculty. Academic role orientation has been described as the emphasis a role occupant (individual) places on his/her areas of responsibility, specifically teaching, research, or service (Zey-Ferrel & Baker, 1984). O'Shea (1982) described role orientation as the individually chosen predominant role which occurs when choices or demands are made regarding time, effort, or energy. Individuals typically have an ideal orientation that may or may not match their actual role responsibilities. When the two do not match, the individual is said to be experiencing role orientation incongruity. An individual's role orientation may also conflict with the orientation perceived as appropriate by supervisors, colleagues, the employing institution, the athletic training profession, and role models. No research has been found that describes athletic training educators preferred academic role orientation and its influence on academic role strain.

Purpose

The purpose of this investigation was 1) to determine the degree of role strain experienced by full-time athletic training educators affiliated with accredited entry-level programs, 2) to identify the leading components of role strain, and 3) to examine the relationships between personal, employment and institutional characteristics, academic role orientation, academic role strain, and the intent to leave the profession.

Definitions of Terms

For the purposes of this study, the following conceptual and operational definition of terms was used:

1. *Athletic training faculty*:

   A person who is a certified athletic trainer (ATC) by the Board of Certification, Inc., and holds a full-time faculty appointment in a college or university that offers an entry-level (graduate or undergraduate) athletic training education program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

2. *Role Strain*:

   Conceptual Definition:

   The perceived difficulty expressed by athletic training faculty when attempting to fulfill multiple role demands (Hardy & Hardy, 1988) Role overload, role ambiguity, role conflict, role incongruity, role incompetence have been identified as components of role strain.

   Operational Definition:

   The grand mean score for all 55 items on the Role Strain Scale. The mean score, in scale units, has a possible range of 1 to 5.

3. *Role Conflict:*

Conceptual Definition:

The existence of clear but competing or incompatible role expectations; a situation in which the role occupant perceives existing role expectations as being contradictory or mutually exclusive; a component of role strain. Role conflict can be further subdivided into three forms: inter-role conflict, intra-role conflict, and inter-sender conflict

Operational Definition:

The combined mean score, in scale units, on items 4, 5, 8, 9, 15, 16, 17, 18, 26, 27, 28, 29, 30, 31, 32, 33, 37, 38, 47, 51, 52, 53, and 54 on the Role Strain Scale.

4. *Inter-role conflict*:

Conceptual Definition:

When role occupants perceive that they are required to enact many roles simultaneously; a component of role strain.

Operational Definition:

The combined mean score, in scale units, on items 4, 16, 27, 28, 29, 30, 31, 32, and 33 on the Role Strain Scale.

5. *Intra-sender role conflict:*

Conceptual Definition:

The demands from a single member of the role set are incompatible or mutually exclusive; one person's expectations of the role occupant are in conflict; a component of role strain.

Operation Definition:

The combined mean score, in scale units, on items 5, 8, 9, 17, 18, 26, 47, 51, 52, and 54 on the Role Strain Scale.

6. *Inter-sender role conflict:*

Conceptual Definition:

Role expectations from one member of a person's role set conflict with the demands of another person in the role set; a component of role strain.

Operational Definition:

The combined mean score, in scale units, on items 15, 37, 38, and 53 on the Role Strain Scale.

7. *Role Ambiguity*:

Conceptual Definition:

A situation in which a role occupant is uncertain about expectations of role performance and role behaviors. Role expectations are vague, unclear, and/ or uncertain to the role occupant; a component of role strain..

Operational Definition:

The combined mean score, in scale units, on items 21, 22, 23, 36, 48, 49, and 50 on the Role Strain Scale.

8. *Role Incompetence*

Conceptual Definition:

The role occupant lacks the necessary skills, abilities, or knowledge to take on the responsibilities of the role; a component of role strain.

Operational Definition:

The combined mean score, in scale units, on items 41, 42, 43, 44, 45, and 46 on the Role Strain Scale.

9. *Role Incongruity*:

Conceptual Definition:

A situation in which a role occupant's perception of him/her self and identity are not congruent with the position occupied. Person-role fit is problematic and the personal values, skills, and abilities are incompatible with expected role behaviors and obligations; a component of role strain.

Operational Definition:

The combined mean score, in scale units, on items 7, 11, 12, 13, 14, 20, 25, 39, 40, and 55 on the Role Strain Scale.

10. *Role Overload*:

Conceptual Definition:

The role occupant experiences difficulty in fulfilling role obligations which are excessive in relation to limited time available and/or complexity of the task. Quantitative overload occurs when the number of obligations exceeds the amount of available time. Qualitative overload occurs when the complexity of the task exceeds the individual's ability regardless of time; a component of role strain..

Operational Definition:

The combined mean score, in scale units, on items 1, 2, 3, 6, 10, 19, 24, 34, and 35 on the Role Strain Scale.

11. *Role Orientation*

Conceptual Definition:

The emphasis a role occupant places on his/her specific responsibilities and expectations. Academic role orientation refers specifically to the emphasis a faculty member places on teaching, research, and service.

Operational Definition:

The subject's response to the first question on the Academic Role Orientation Scale, "Which orientation best represents how you would ideally like to spend your time working?" served as the individual's ideal role orientation.

12. *Role Orientation Congruency*:

Conceptual Definition:

The extent to which an individual's ideal role orientation is consistent with their actual work responsibilities and with the perceived role orientation of other role set members and constituent agencies.

Operational Definition:

Ideal role orientation was labeled personally congruent when the results of question A (ideal role orientation) matched the results of questions B (actual role orientation). Ideal role orientation was also matched between the results of question A (ideal) and questions C through G (perceived orientation of role set members) on the Academic Role Orientation Scale. Actual role orientation was also matched between the results of question B (actual role orientation) and the results of question C through G.

Delimitations

This study was limited to assessing academic role strain and the leading components of role strain experienced by athletic training faculty members that had more than one year of certification experience, that were employed at institutions sponsoring an entry-level athletic training education program accredited by CAAHEP, and that had full-time faculty status at the time of survey completion. Role strain and the leading components of role strain have been previously examined within the occupation psychology, higher education, and allied health and nursing education literature.

Limitations

This study was limited by the following factors:

1. The use of the on-line survey technique is not a new research method, yet it may influence a potential subject's decision to participate in a study. The generalizability of this research study was therefore limited to faculty members that are comfortable with and willing to participate in on-line data collection.
2. This study was further limited due to the potential time-sensitivity of the administration of the academic role strain scale. Data collection took place over an 8-week period (March 1 to April 30) in the spring of 2006. Therefore results on the role strain scale may have been influenced by faculty member's perceptions of workload demands unique to this time in the academic calendar. The instructions to the survey instrument were written in such a way as to encourage faculty members to consider each item in relation to his/her current

employment demands and not limit his/her responses to individual daily practices or experiences.

3. The generalizability of this study was limited to full-time athletic training faculty in CAAHEP accredited entry-level programs and does not include part-time/adjunct athletic training faculty, non-faculty approved clinical instructors (ACIs) or non-ATC faculty teaching or working within the athletic training curriculum.
4. The research relied on the subject's perceptions of the frequency of stressful situations to examine role strain and did not measure actual stressful situations, or the physiological responses to stress. As a result of the subjective nature of this investigation, there was the potential for other non-employment related variables to affect an individual's perception of their own occupational situation and could have influenced their responses on the role strain scale.
5. The questions related to intention to leave are not direct measures of job satisfaction and do not directly measure an individual's actual behavior. Therefore, it was impossible to predict the number of AT faculty members that will leave their position or the profession; it only served as another dependent variable in relation to role strain. Previous research has supported the examination of an individual's intent to leave as a valid correlate of job satisfaction and predictor of future behavior among employees and faculty (Hellman, 1997; Barnes, Agago, and Coombs, 1998).

Assumptions

Two major assumptions underlie this investigation. First, based on symbolic interaction theory, it was assumed that individual role occupants negotiate their role behaviors and expectations through communication with role set members (Hardy and Hardy, 1988; Woods, 1992). Faculty at institutions of higher education are generally expected to engage in varying degrees of teaching, research, and service based on institutional and departmental mission and faculty expertise. Second, an assumption was made that some degree of role strain is expected in occupational roles, especially those of college and university faculty. Some stress can be a source of professional growth, increased competence, creativity, and intellectual challenge (Tierney, 1999). By coping with stressful situations, individuals are able to utilize problem solving skills and seek positive change. Colleges and universities espouse a shared belief in academic freedom. The Joint Review Committee on Educational Programs in Athletic Training (JRC-AT), now known as the Commission on Accreditation of Athletic Training Education (CAATE), the NATA Education Council, and CAAHEP profess a commitment to institutional autonomy. These issues may have influenced how individuals and institutions negotiated their role expectations and influenced the development and perception of academic role strain.

Research Questions

Several overarching questions guided the design and analysis of this investigation.

1. What is the degree of role strain experienced by full-time athletic training faculty associated with CAAHEP accredited entry-level athletic training programs in the United States and what do faculty members report as the leading components of role strain?

   Previous research examining athletic training program directors has identified workload, tenure and promotion requirements, and clinical and academic demands as sources of stress (Perrin & Lephart, 1988; Leard, Booth, & Johnson, 1991; Foster & Leslie, 1992; Winterstein, 1998; Perkins & Judd, 2001; Judd & Perkins, 2004). Academic role strain provides a unique framework from which to examine the issues and competing responsibilities affecting AT faculty. Based on nursing and other allied health science faculty literature, it is hypothesized that athletic training faculty members as a group will report a moderate degree of role strain. Among the seven subscales, it is also expected that athletic training faculty members as a group will report role overload and inter-role conflict as the most significant components of role strain.

2. What personal, employment, and institutional factors influence the perception of academic role strain, its subscales, and the intent to leave?

   With regard to personal factors, it was hypothesized that athletic training faculty members who are early (less than 5 years in athletic training education) in their

academic careers, non-tenured, and without the terminal degree will report greater amounts of role strain than those who have more experience, have tenure or are in a non-tenure track position, and have the terminal degree. It is also hypothesized that athletic training faculty members with less than 5 years in their current position will exhibit greater role strain scores than those with more than 5 years of employment at their current institution. Finally, it is expected that athletic training faculty members who are currently enrolled in a doctoral program while working full-time will report greater role strain scores than those faculty members not enrolled in a degree program or who have a terminal degree.

With regard to employment factors, it was hypothesized that athletic training faculty members who have clinical responsibilities and are employed in dual appointments (i.e. Program Director/Head Athletic Trainer, faculty/clinical athletic trainer) will report greater role strain scores than those faculty members without clinical appointments. It is also expected that there will be a significant, positive correlation between the number of hours worked per week and academic role strain and subscale scores.

Finally with regard to institutional factors, it was hypothesized athletic training faculty employed at Doctorate-granting Universities will report greater role strain scores than those faculty members at Master's Colleges and Universities and Baccalaureate Colleges. It is also expected that athletic training faculty at private institutions will report greater role strain scores than those faculty members employed at public institutions. Third, it is expected that athletic training faculty members

employed at institutions affiliated with NCAA Division III will report greater role strain scores than faculty members employed at institutions in NCAA Division I, II, and NAIA. Finally, it is hypothesized that athletic training faculty members employed at initially accredited (less than 5 years) institutions will report greater role strain scores than faculty members employed at continuing accreditation institutions.

3. What is the relationship between academic role strain, its subscales, and academic role orientation?

   Academic role orientation is based on the emphasis a faculty member places on his or her responsibilities. It was hypothesized that athletic training faculty members with an ideal role orientation that emphasizes teaching (Type I – Trs) will report greater role strain scores than faculty members reporting other types of role orientation. It is also expected that role orientation incongruity will also influence role strain scores. Athletic training faculty members with an ideal role orientation incongruent with their actual role orientation will report greater role strain scores than faculty with congruent role orientations. Athletic training faculty members with role orientations incongruent with other role set members will also report greater role strain scores than faculty members with congruent role orientations.

4. What is the relationship between academic role strain and an individual's intent to leave athletic training education?

Intent to leave has previously been identified as having a strong relationship with overall job satisfaction (Barnes, Agago, & Coombs, 1998). It was hypothesized that individuals classified as having high academic role strain scores will report more frequently consider leaving their institution, leaving athletic training clinical practice, leaving athletic training education, leaving the profession of athletic training, and leaving academe to pursue other outside interests.

Dependent Variables

The mean total role strain scores and the mean role strain subscale scores for role conflict (inter-role conflict, intra-sender role conflict, inter-sender role conflict); role ambiguity; role incompetence; role incongruity; and role overload served as the dependent variables in this investigation. The five items examining the respondent's intent to leave also served as dependent variables in this study.

Independent Variables

The independent variables were subdivided into four primary categories: role occupant, role, role setting, and role orientation.

Items on the survey related to the role occupant included personal demographic characteristics such as age, gender, marital status, parental status, number of years in athletic training education, year of and route to BOC certification, highest level of

education, degree type, discipline of study, and previous employment and teaching experience.

Items on the survey related to the role included employment characteristics such as title, faculty rank, contract-type, contract length, number of years until review, teaching load per year, number of years at current institution, union affiliation, percentage of time spent in teaching, research, service, administration, clinical practice, and travel, and finally the number of hours worked per week.

Items on the survey related to the role setting included institutional characteristics such as school or college, division/department, degrees granted within department & athletic training program, number of hours required for degree, institutional affiliation/funding source (public/private), athletic affiliation, length of time accredited, number of years until re-accreditation, and program characteristics including number of faculty, number of ACIs (on & off campus) , number of affiliated sites, number of students, and faculty/student ratio.

Academic role orientation is the amount of emphasis placed on each area of faculty responsibility (teaching, research, and service). Role orientation has been further divided into seven areas: ideal orientation, actual orientation, institutional mission, needs of the profession, supervisor's orientation, colleagues' orientation, and role models' orientations. The individual's ideal and actual role orientations served as independent variables when examining role strain and the subscale items.

The degree to which a person's role orientation conforms to his/her role set members' expectations may be a cause of role strain. Therefore, role orientation

congruity was also identified as an independent variable for examining role strain. Ideal role orientation congruity was classified according to ideal-actual congruity, ideal-institution congruity, ideal-supervisor congruity, and ideal-colleagues congruity. Actual role orientation congruity was classified according to the actual-institutional, actual-supervisor, and actual-colleagues congruity.

CHAPTER II

LITERATURE REVIEW

Purpose of the Review

The purpose of the following review of the literature is to provide the reader with background information related to the theoretical framework upon which this study is based, to discuss the current climate of higher education in the United States, to discuss work load issues faced by health science faculty, to present the history of athletic training education and its relationship to current workload issues, and finally to describe the characteristics of athletic training educators.

Role Theory and the Concept of Role Strain

Social scientists and organizational psychologists have often sought to explain the complexities of organizations and institutions, the interactions that occur between individuals, and the factors that influence an individual's behavior. Role theory is one approach that has been used to examine these social conditions and behaviors within organizations. According to Conway (1988), role theory "represents a collection of concepts and a variety of hypothetical formulations that predict how actors will perform in a given role, or under what circumstances certain types of behaviors can be expected (p. 63)." Though a complete historical discussion of role theory is beyond the scope of

this review, it is important to review the major theoretical frameworks that underlie role stress and role strain – two major areas under investigation.

Within role theory, two theoretical perspectives, social structuralism (also known as functional-structuralism) and symbolic interactionism, have predominated the research on roles. In both perspectives, an individual under examination is termed the role occupant. The two differ, however, in that social structuralism defines a role as a fixed element of a social system regardless of the role occupant. In contrast, symbolic interactionism defines roles by the expectations and responsibilities espoused by the role occupant and other role set members, which is negotiated through social interaction, exchange and communication within the social system (Merton, 1957).

Social structuralism is based on an underlying assumption that roles are more or less fixed positions within a social system to which are attached certain expectations and demands and is enforced by positive or negative sanctions. According to structural role theory, organizational/structural factors and status influences the role and the role occupant's behavior and actions. This perspective of society posits that roles as well as institutions and cultures are *social facts* which are transmitted to uninitiated adults, also termed socializees, into the system through socialization. The behavior of individuals is ordered by both sanctions for violations of social norms and through the "collective conscience" of the social group. From a functionalist perspective, social roles evolve in response to structural conditions and changes mandated from within the given institution or system (Conway, 1988).

Within colleges and universities, a social structural perspective would explain the actions and behaviors exhibited by faculty as the result of the faculty role. The traditional expectations that faculty engage in teaching, research, and service as well as the historical responsibilities and benefits attributed to faculty work such as autonomy and self-directed scholarship influence the socialized behaviors of both new and experienced faculty. One major criticism of functional-structural theory of social behavior, however, is that it does not account well enough for the wide variations in behavior that takes place within complex social structures. If all occupants of similar roles (i.e. faculty) were responding to structural demands and expectations of their role as faculty, then their individual behaviors would be predictable and consistent. This in fact is not the case. Individual faculty members differ on their scholarly productivity, teaching ability and desire to teach, ability to multi-task, desire to take on leadership roles, and seek out new challenges. An individual's personality, prior experiences, and coping mechanisms can significantly impact the actions of an individual. The expectations of others will also influence how an individual acts in a given situation (Blackburn & Horowitz, 1986).

In contrast to social structuralism, symbolic interactionism attempts to account for differences in behavior by arguing that individuals negotiate their roles through communication and interaction with role set members through the interpretation of symbols (Merton, 1957; Conway, 1988). Each actor in a given situation defines and interprets the meaning of any symbols. In any given interaction between two individuals, the actor defines the situation according to the action and meanings attributed to the moment, as it seems to him or her. The definition and interpretation of the situation

forms the basis for future action (Hardy & Hardy, 1988). From the faculty member's perspective, each interaction with role set members influences their decisions to pursue a planned act. For example, both the expressed and implicit emphasis a department chair, faculty colleagues, and an institution places on research will serve as a symbol to be interpreted by the faculty member as a major area of evaluation for tenure, promotion, and merit raises. The amount of resources provided for teaching and technology might also be interpreted by an individual as an expectation for role behavior.

These two perspectives (structuralism and symbolic interactionism) have been utilized in the development and examination of role stress. Role stress may be the result of conflicting demands from various role set constituents. Role stress may also result from role ambiguity or a vague set of expectations from a single role set member. When a role occupant is unable to cope with the resulting role stress, the individual is said to be experiencing role strain. Role stress is unique to the role; role strain is unique to the individual. The individual's skill at communicating, negotiating, and coping with the stress can serve as a mediator for role strain. Goode (1960) defined role strain as the "felt difficulty in meeting role obligations" (p. 483). Others have identified and operationalized role conflict, role ambiguity, role overload, role incongruity, role incompetence, and role overqualification as potential sources of role strain (Kahn, Wolfe, Quinn, & Snoek, 1964; Hardy & Hardy, 1988; Mobily, 1991). Several psychological and physiological outcomes have also been identified that are linked with role strain including job dissatisfaction (Bedian, Mossholder, & Armenakis, 1983; Horowitz, Blackburn, Edington, & Kloss, 1988) , decreased productivity, decreased health,

absenteeism, decreased organizational commitment and propensity to leave an organization (Klenke-hamel & Mathieu, 1990; Ward, 1995; Barnes, Agago, & Coombs, 1998).

Potential Sources of Role Strain

For the purposes of this investigation, six potential sources of role strain have been identified from the literature: role ambiguity, role overload, role incongruity, role conflict (inter-sender, intra-sender, and inter-role), role incompetence, and role overqualification. (See Table 1).

Role ambiguity is by definition, a characteristic of all positions occupied by professionals (Hardy & Hardy, 1988). Faculty members as professionals must be capable of dealing with problematic situations and unpredictable behaviors from colleagues and students. The professional faculty member is encouraged and required to function autonomously within the classroom and within his/her scholarly pursuits. Role ambiguity does not have to be a negative situation; it can provide intellectual challenge and opportunity for creativity within the roles as teacher, researcher, and administrator. The ambiguity about one's role may stem from uncertainty in evaluation criteria for tenure and promotion, a less than adequate orientation when taking on a new faculty position or entering a new institution, and when expectations are generally unclear from other role set members.

Table 1.

Potential Sources of Academic Role Strain.

Source	Definition	Example
Role Ambiguity:	Extent to which clear information is lacking with respect to the expectations of a particular role.	Ambiguous evaluation criteria for tenure and promotion, unclear job descriptions
Role Overload:	Extent that quantity and quality of activities and demands exceed resources and abilities of the role occupant	Total hours worked, time allocated to competing demands (teaching, research, service) and professional development
Role Incongruity:	Extent to which expectations from the organization and/or members of the role set are in conflict with the expectations, aspirations, attitudes, and values of the individual.	The need to service and provide appropriate medical coverage for a patient versus providing an optimal learning experience for the student; desire to focus on teaching conflicts with institutional focus and emphasis on research and grant funding
Inter-Sender Role Conflict:	Expectations from two competing role set members are in conflict with one another	Demands for increased use of distance education from administration conflicts with desire for increased personal attention from students and parents
Intra-Sender Role Conflict:	Two competing demands from the same role constituent	Administrator expects increased research productivity and utilization of technology, but does not provide added infrastructure of equipment or release time.
Inter-Role Conflict:	Membership in one role conflicts with the demands of another role	Role demands as a parent or spouse conflicts with the role demands of being an employee or administrator
Role Incompetence: (Under-Qualification)	Extent to which role occupant is under prepared for a particular role.	Often occurs when an individual takes on added responsibility for which he/she has not be appropriately trained. Novice researcher or instructor, non-doctorally trained faculty member, novice clinician, administrator, or program evaluator.
Role Over-Qualification	Extent to which role occupant's skills and abilities exceeds the demands and activities of a particular role	Often occurs when an individual is unable to utilize skills. Expert clinician may not be able to use skills due to lack of adequate resources or recognition of those skills by others.

Role overload has been described as having multiple role responsibilities that exceed available time or ability. Quantitative overload occurs when a person has too much work to be done in a given time period. Qualitative overload occurs when role expectations are beyond the skills, abilities, and knowledge of the role occupant (Mobily, 1991). Qualitative overload has also been described as role incompetence and will be discussed under that definition. Faculty members are required by their positions to traditionally address multiple roles and responsibilities in teaching, research, and service. The extent to which each responsibility is emphasized is dependent on the importance perceived by the role occupant. At major research universities, the implicit and explicit tenure and promotion policies place a premium on a faculty member's focus towards research and scholarship. At a liberal arts college, teaching may take up a majority of a faculty member's time. Role overload occurs when the amount of expected productivity (publications, courses taught, student supervision, number of hours worked) exceeds the amount of resources allocated or the abilities of the individual to meet the role expectations. Program directors and faculty members in athletic training report having a significant number and varied responsibilities within their programs (Perrin & Lephart, 1988; Perkins & Judd, 2001). They also report working in excess of 50 hours per week (Staurowsky & Scriber, 1998). There is the potential for role overload among athletic training faculty.

Role incongruity is defined as a situation in which a role occupant's perception of him/her self and identity are not congruent with the position occupied (Mobily, 1991). In situations where role incongruity exists, person-role fit is problematic and the personal

values, skills, and abilities of the role occupant are incompatible with expected role behaviors and obligations. Little research has examined the extent of role incongruity among university faculty. The type of institution a faculty member chooses to work for has the potential to significantly impact the relative importance given to each role. If a faculty member values and emphasizes teaching over other roles, yet the institution values and rewards research excellence, role incongruity exists and the faculty member may experience role strain. One method to mitigate this incongruity is for the faculty member to extend their emphasis on teaching into their scholarly inquiry or for the institution to provide flexible evaluation methods for faculty members. Another method advocated to minimize role incongruity is to ensure an appropriate fit between the mission and values of an institution with the preferences of a faculty member (Ingersoll, et al., 2005).

The term role conflict has been used interchangeably with role stress and role strain, but it is most frequently defined as a situation where there exists clear but competing or incompatible role expectations (Hardy & Hardy, 1988). The role occupant perceives existing role expectations as being contradictory or mutually exclusive. Role conflict can be further subdivided into three forms: inter-sender, intra-sender role conflict, and inter-role conflict. Faculty members in general have multiple responsibilities and interact with a large number of role set members (colleagues, students, supervisors, clinical affiliates). When role expectations from one member of a person's role set conflict with the demands of another person in the role set, inter-sender role conflict occurs. Intra-sender role conflict, on the other hand, occurs when the

demands from a single member of the role set are incompatible or mutually exclusive. One person's expectations of the role occupant are in conflict. An example may help illustrate the difference. If a department chair expresses concern to a faculty member that they are not involved as much as expected in departmental governance because of too much student contact, and within the same week, a faculty member receives student evaluations expressing a lack of availability, then inter-sender role conflict exists. If that same department chair were to then ask the faculty member to serve as the advisor to a student organization, intra-sender role conflict exists.

Inter-role conflict occurs when role occupants perceive that they are required to enact many roles simultaneously (Mobily, 1991). Inter-role conflict may occur when a faculty member has to balance the amount of time and effort afforded each role as administrator, teacher, clinician, researcher/scholar, and personal roles expectations (i.e. caregiver, partner). This should not be confused with role overload. Overload exists when the quantity of responsibilities exceeds an individual's capacity to meet expectations. Inter-role conflict exists when expectations for separate roles collide. Faculty, however, must satisfy and negotiate each role with other role set members and may as a result experience role strain.

Role incompetence, also termed role underqualification or qualitative overload, occurs when role expectations exceed one's abilities, knowledge and skills and results in inadequate role performance. Ingersoll, et al. (2005) discuss the issues facing junior faculty in athletic training and whether they have the necessary skills to negotiate the faculty role as well as the administrative demands as program directors. Faculty

members may experience role incompetence when attempting to introduce new technology without proper training, when taking on new roles as department chairs and program coordinators, or when facing curricular changes and education reform (Hanna, 2000).

Role overqualification has received the least amount of research in faculty workload studies. Role overqualification occurs when a faculty member's skills, knowledge, and abilities exceed the demands of the position. Gmelch (1995) describes the situation as being under-stimulated. Faculty members that are under-stimulated or overqualified may experience role strain as they cope with less challenge and stagnation.

One method that has been proposed to mitigate the sources of role strain is to provide adequate socialization to a given role. Socialization is the "shaping" of an individual and the processes that influence the transformation of one person's values, beliefs, and skills over time (Hurley-Wilson, 1988). Socialization is an interactional activity where the socializer (an individual in a given institution or social interaction) and the person being socialized are mutually influenced as a result of their encounters with one another. Adequate socialization of a faculty member can be viewed as a means of attaining and maintaining social and cultural continuity of the university and the historical role faculty have played in teaching, research and scholarship, and service. During the first years of a faculty member's career, each individual is socialized into the norms of the department, the discipline, the academe in general, and the specific institution. Whether or not a faculty member is adequately socialized may be measured against his/her performance and behaviors within the social framework. This often is

judged within the tenure and promotion systems at many colleges and universities. Those faculty members who are not well normalized into the norms and values of the community/university may experience greater difficulty in attaining tenure and promotion if they engage in behaviors not viewed as valuable to the group (i.e. other faculty). This conformity to the mission and values of the group enables the traditions and needs of the university to continue while also encouraging the role occupant to internalize the social norms over time.

The Work Climate of Faculty in Higher Education

Faculty members in higher education have traditionally been required to work within three primary areas: teaching, scholarship, and service. Within the tradition of the liberal arts college, teaching has been the primary mission of higher education since its inception in the United States. With the development of the research university, it is perceived by many that scholarship, primarily in the form of research publication, presentations, and funded grants, has become the leading criteria by which faculty are evaluated and valued. The pressure to gain recognition for one's scholarship while also garnering research dollars to assist with institutional operating costs has been criticized by many as adding substantial stress to faculty. And finally, the number of full-time faculty positions and tenure-track positions within institutions of higher education continues to diminish. Colleges and universities continue to expand the role of adjunct faculty members, non-tenured faculty, and instructional staff in place of tenured faculty.

This places considerable workload for faculty governance and administration on fewer and fewer faculty members.

Challenges Facing Faculty

William G. Tierney (1999) in *Faculty Productivity: Fact, Fictions, and Issues* illustrates the dynamic nature of post-secondary education and the forces for change currently facing both the faculty and the institutions in which they work. He argues that five factors are pressuring higher education: money, prestige, the organization of academic work, governance structure, and purpose. These issues have also been raised by Levine (2001) when discussing the demands placed upon institutions and faculty by patrons, students, employment conditions, technology, and the growth of private-sector competitors.

Revenue

The amount of money available to higher education in the form of government subsidy at public institutions and by funding donors and patrons at private institutions is diminishing at a rapid rate in comparison to rising operating costs. Many state-sponsored universities have increased tuition by as much as 20 % in order to cover the rising costs, while at the same time decreasing the numbers of full-time faculty and relying on an increasing number of part-time, adjunct, and non-tenured faculty members (Gravois, 2006). The need for funding has also increased the "academic ratchet" by increasing the pressure on faculty members to compete for diminishing dollars from the federal government and other funding agencies (Milem, Berger, & Dey, 2000). This often times

results in an increase in the amount of collaboration occurring with business, an increase in the pressure to bring research results to market through technology transfer arrangements, and a decrease in the amount of time faculty devote to the other areas of their work – teaching and service (Massy & Zemsky, 1994, Milem, Berger, & Day, 2000).

Competition for Recognition

The second challenge facing faculty and institutions is the competition for prestige. Both within and between universities, there is increasing pressure to emulate the top-tier institutions, departments, and faculty members and to increase one's rankings, productivity, and national reputation as a leading university or college. Classification and ranking systems are evident throughout higher education. In 2005, in response to the increasingly varied nature of higher education and the view that the 2000 classification scheme was viewed too much as a ranking system, the Carnegie Foundation for the Advancement of Teaching significantly revised *The Carnegie Classification of Institutions of Higher Education* (Carnegie Foundation, 2005) to provide additional information and further data to compare institutions. The classification system has been expanded beyond the single classification system based on the highest degree granted by the institution (Doctorate, Master's Colleges and Universities, Baccalaureate, Associates, and Specialized Institutions) to include five new system schemas: undergraduate instructional program, graduate instructional program, enrollment profile, undergraduate profile, and size & setting. The previous classification scheme has been retained as a

Basic Classification System, but it has been modified to allow institutions to be categorized across Associate Colleges, Doctorate-Granting Universities (very high research, high research), Master's Colleges and Universities (larger, medium, smaller programs), Baccalaureate Colleges (Arts and Sciences, Diverse, combined with associate's), Special Focus Institutions, and Tribal Colleges (Available at http://www.carnegieclassification.org). The use of these classification schemes is valuable to institutions when making comparisons across institution types, but they have also been co-opted by other popular media to provide consumers (potential students) with comparisons as well.

The *U.S. News and World Report America's Best Colleges* (USNEWS.com) is an annual best seller and is used by many institutions to market and validate their position within the overall system of higher education. The classification system uses a national and regional tiered ranking system. Institutions are pressured to maintain their position or to move up in the ranks in order to garner greater prestige and marketability to potential undergraduate and graduate students. Other national ranking and marketing systems such as *Fiske's Guide to Colleges* (Fiske & Logue, 2005) and *The 361 Best Colleges* (Meltzer, Maier, Brown, et. al., 2006) compiled by the Princeton Review serve as additional benchmarks by which institutions may judge themselves. The popular media classification schemes are valuable to consumers by providing detailed information about selectivity, class size, retention rates, numbers of faculty, research productivity, etc. But, they also add fuel to the fire for challenges facing institutions to raise their prestige and image. This could have the potential to increase individual

faculty member's role strain when having to balance the needs for research and scholarship that may conflict with the other role responsibilities a faculty member carries. This leads directly into Tierney's third challenge - the organization of faculty work.

Organization of Faculty Work

The study proposed is intended to examine the organization of academic work and its impact on role strain experienced by athletic training faculty members. Tierney (1999) argues that the traditional methods by which faculty deliver their knowledge and skills - through semester or quarter based courses and primarily through lecture – will be, and some argue has been, replaced by an ever changing system where technology and distance education, continual learning, and consumer driven demand will force faculty to change their practices. This trend has the potential to add to faculty stress. Faculty may not have the necessary technological and pedagogical skills to implement new and innovative instructional systems. The time demands required of distance education is significant and comparable to face-to-face teaching. Even traditional classroom based courses are enhanced with the use of course management systems such as Blackboard Academic Suite (Blackboard Inc. Washington, DC), WebCT (WebCT, Inc., Lynnfield, MA) and Moodle (Moodle Services Network). Students are more and more technologically advanced and have come to expect to be able to communicate with faculty via e-mail, to access course information and documents via the Internet, and to use on-line communication. Faculty have also been required to use ever increasing amounts of technology to ensure academic honesty and preventing plagiarism through

such means as Turnitin.com (iParadigms, Berkley, CA), communicate and collaborate with colleagues on papers and conferences, conduct teleconferencing and video conferencing, and publish in both print and electronic media.

There is also the added pressure to use the scholarship of teaching and engagement to involve students more fully in their own learning. This emphasis on engagement has diminished the role of the professor as the bearer and deliverer of knowledge, "sage on the stage" and more to a facilitator of learning experiences, the "guide on the side". Implementing alternative and outside of classroom learning experiences such as problem based learning, service-learning, collaborative learning activities, student research, and fieldwork or clinical education requires additional time for faculty to collaborate with other agencies, coordinate student involvement, and evaluate student performance through varied means beyond traditional assessment methods (i.e. papers and tests). This adds another potential area of role strain where faculty may not feel adequately prepared for the role of educator, technology specialist, field-site coordinator, and evaluator.

Faculty Governance

The final two challenges proposed by Tierney (1999), governance structure and purpose, are evident in the mechanisms in place for institutions to govern themselves and to be held accountable to their peers and constituents through accreditation. Faculty governance is a method by which faculty have voice and influence over academic issues

within an institution. According to the *Statement on Government of Colleges and Universitie*s (1966) by the American Association of University Professors,

> The faculty has primary responsibility for such fundamental areas as curriculum, subject matter and methods of instruction, research, faculty status, and those aspects of student life which relate to the educational process. (American Association of University Professors, 1966)

As such, most institutions have adopted complex and multi-layered organizational structures to monitor and direct the decision making afforded the faculty. Faculty continue to have significant control over their decision making authority in regards to research focus and curriculum, yet greater and greater authority is being given to administration regarding resources, cost-containment, and outcomes measures for revenue generation. Faculty members are reporting greater perceived demands to publish, garner funds, and retain underprepared students as a result of financial concerns. In most cases, faculty governance and advocacy takes the form of committee work – an essential though not entirely enriching or rewarding facet of faculty life. Faculty members report significant time spent on committee work or service to the university, though it is often not given as much weight in the tenure, promotion, and reward structures for faculty evaluation in comparison to research and teaching.

Accreditation

In contrast to internal faculty governance mechanisms that influence the academic life of the institution, accreditation by peer evaluators serves as a quasi-voluntary

mechanism by which institutions and individual programs are able to self-regulate and protect academic integrity. It is a quasi-voluntary process because federal and state agencies mandate that institutions be accredited by regional agencies such as the Southern Association of Colleges and Schools (SACS) in order to issue federal grants for student aid and research. Most states also require that individuals graduate from accredited institutions in order to qualify for state issued licenses for professionals (such as in law, medicine, nursing, teaching, and athletic training). According to the Council on Higher Education in America (CHEA), "accreditation in higher education is a collegial process of self-review and peer review for improvement of academic quality and public accountability of institutions and programs." (CHEA, 2000). Faculty members are often involved in both the self-review and peer evaluation procedures.

Within the recent accreditation history of athletic training, the program director was the college's representative to the Joint Review Committee for Athletic Training (JRC-AT), the evaluating agency for entry-level programs, and to the larger Commission on Accreditation of Allied Health Education Programs (CAAHEP), the accrediting agency. On July 1st, 2006, the JRC-AT was disbanded and the Commission on Accreditation of Athletic Training Education (CAATE) assumed full accreditation responsibilities for athletic training education programs (JRC-AT Update, 2005). With external accreditation comes significant challenges for the program director and associated faculty members. The *2005 Standards for the Accreditation of Entry-Level Athletic Training Education Programs* (CAATE, 2005) sets the parameters by which all athletic training education programs are evaluated during the self-study and on-site

review process. In order to achieve or maintain accreditation by CAATE, each institution must ensure compliance with all standards, submit an annual report, and conduct a periodic self-study for re-accreditation. A more complete discussion of the history of athletic training education and accreditation is presented later in this review. Suffice is to say that with external accreditation comes legitimacy but also an increased layer of accountability, workload, and the potential for stress for faculty to assure compliance.

Reported Sources of Faculty Stress

Faculty stress levels have repeatedly appeared in the literature on faculty work in higher education. Blackburn and Lawrence (1995) present the results of their research on the work lives of faculty in their book, *Faculty at Work: Motivations, Expectations and Satisfaction.* The authors begin with a theoretical framework that stipulates that individual characteristics and employing institutions "combine and lead to variations in faculty motivation, behavior, and productivity." (p. 15). Gmelch (1995) in *Coping with Faculty Stress* suggests that faculty responses to stress can fall into three categories: understimulation, optimal stimulation, and overstimulation. During a period of understimulation, faculty are faced with boredom, lack of creative stimulation or incentive to create, frustration and dissatisfaction. Faculty members operating under a situation of understimulation for an extended period of time will tend to "rust out" or lag behind in their overall productivity. Critics of tenure have cited the potential for less than productive full professors as the reason to eliminate tenure or to institute post-tenure review mechanisms. In contrast, faculty members operating under a situation of overstimulation for an extended period of time will tend to "burn out" or have carryover

of over-stimulation into emotional, physical, and psychological disturbances and withdrawal. Within the context of role theory, role overload has been correlated with the potential for burnout among university professors (Klenke-Hamel & Mathieu, 1990), nursing faculty (Anderson, 1998), and faculty within kinesiology, teacher education, and coaching (Massengale, 1981; Decker, 1986; Darylchuck, 1993, Williamson, 1993). The ideal situation exists when a faculty member experiences optimal stimulation and can engage in creativity, identifying and attempting to solve challenging problems, teaching effectively, and engaging in productive scholarship & service (Gmelch, 1995).

Seldin (1987), in a review of the causes of academic stress, identified several major causes: 1) inadequate participation in institutional planning and governance, 2) too many tasks, too little time, 3) low pay and poor working conditions, 4) inadequate faculty recognition and reward, 5) unrealized career expectations and goals, and 5) unsatisfactory interactions. Within university faculty, several findings support Gmelch's characterization of faculty stress and Seldin's categorization. Thompson and Dey (1998) identified time constraints, promotion concerns and gender differences as possible sources of job stress of African American faculty at predominantly white institutions. Intrinsic motivation to conduct research and a perceived lack of rewards contingent on doing research, in combination, were found to account for 74 % and 81 % of the variances in burnout scores among tenured and untenured faculty at one major research university in the mid-west. Faculty with greater intrinsic motivation to do research had less research burnout than those with greater extrinsic motivation (Singh, Mishra, & Kim, 1998). Iiacqua, Schumacher, and Li (1995) reported that both extrinsic and intrinsic

factors such as perception of the administration, academic ability of students, and the job's challenge of one's skills and ability resulted in greater job satisfaction scores among business faculty. Olsen (1993) examined the work satisfaction and stress of first and third year faculty in a longitudinal study at one large, public research university. Her results indicate a moderate but significant negative correlation between job satisfaction and work stress from the first to third years of appointment. This time frame coincides with a faculty member's approach towards tenure and promotion evaluations. Within the third year of employment, compensation/security, feedback, recognition/support, and time/balance conflicts were most consistently associated with higher work stress. Lease (1999), however, found that years of experience and gender did not have a significant relationship with occupational role stress.

Institutional characteristics and personal issues also influence the work lives of faculty. Milem, Berger, and Dey (2000) reported on the increase in the amount of time faculty spent on all work related activities. Using national survey data of faculty collected between 1972 and 1992, the authors examined the consequences of increased time spent on research and publication and its impact on other areas of faculty work. While overall the amount of time spent on research increased across all institution types, the greatest increase occurred at doctoral and comprehensive universities. Interestingly, during the same time period, the amount of time faculty reported spending on teaching and preparing for teaching also increased at these same types of institutions. At the research institutions, the amount of time spent teaching was unchanged and the amount of time spent teaching increased the greatest at liberal arts colleges. The amount of time

faculty spent advising students decreased at all institution types with the greatest decrease occurring at the research universities. The authors speculate that the trends by doctoral granting and comprehensive institutions to emulate the research universities have caused faculty to increase research productivity while not adjusting the associated workload demands for teaching.

Rather than focusing on institutional types and the work of faculty, Sorcinelli and Gregory (1987) proposed that personal life issues and professional work requires a precipitous balancing act. They indicate that the "push towards careerism" has mitigated the ability of the faculty member to have a balanced and fulfilling personal life. They also postulate that there are too many roles for faculty with little variability in the negotiations that occur in faculty roles, and even fewer good role models. While this may have changed in more recent years, faculty are still expected to function within the three traditional arenas. This raises the potential for significant role overload and role conflict. They suggest that communication, organization and time management, social support, and flexibility are required of faculty seeking to balance both personal and professional aspirations. They also suggest that institutions implement favorable policies for personal leave, adjusting the tenure clock, flexible scheduling, and childcare for professors with child-rearing responsibilities. Many of these suggestions have been implemented, but the issues of family-work conflict continue to affect university faculty (Elliot, 2003).

Health Science Faculty Workload and Stress

Within higher education, faculty working within professional preparation programs in the health sciences have an added stress associated with balancing the needs of academia with the additional expectations of engaging in clinical practice or maintaining clinical competence. Faculty workload and stress studies within the health sciences have examined role strain, job satisfaction, intent to leave and turnover, burnout, and coping mechanisms in a variety of disciplines. Because athletic training educators share common workplace characteristics as faculty members in nursing, social work, physical therapy, dentistry, and medicine, it is appropriate to review the studies examining their stresses and workload. It is also appropriate to review work-related stress studies among faculty in kinesiology and physical education programs since the majority of athletic training faculty members remained employed in affiliated departments and schools.

Nursing Faculty

The literature examining role theory and role strain is most prevalent in nursing education. Hardy and Conway (1988) present a thorough analysis of role theory and its implications for health professionals within the framework of holistic nursing practice. In a review conducted by Lengacher (1996), organizational factors, faculty clinical practice, and in-experience with research and grant writing were significantly correlated with faculty reported role strain and/or role stress. Goldenberg and Waddell (1990) reported that heavy workload (combined clinical and classroom teaching), retaining failing students, failing clinically unsatisfactory students, meeting research requirements,

and providing individual clinical supervision were the highest rated source of stress among baccalaureate nursing faculty. Piscopo (1994), in another study examining role strain among clinical nurse faculty, found that organizational climate and communication had a linear negative relationship with role strain scores. Clinical nurse faculty that reported higher perceptions of communication and organizational climate reported lower role strain. Piscopo's findings were supported by Oermann (1998) when she examined clinical nurse faculty at both associate's and baccalaureate degree granting programs in the Midwest. Role overload and role conflict were the highest rated sources of role strain. Full-time faculty with doctorates reported higher role strain scores than other non-doctorally trained faculty or part-time clinical faculty. Snarr and Krochalk (1996) found weak relationships between job satisfaction and organizational characteristics. In their study, 86 to 93 percent of nursing faculty were satisfied with their jobs in general, the dimensions of their work, supervision, and coworkers. Faculty were less satisfied with pay and opportunities for promotion. Pappas (1988) also found that professional role conflict exists among nursing faculty. These findings confirm Moody's (1991) results examining nurse faculty at doctorate granting schools of nursing.

The studies by Mobily (1987, 1991) and Hanna (2000) provide the greatest support to the hypotheses in this investigation. Mobily (1987) examined the extent of role strain reported by university nurse faculty and its relationship to socialization experiences, role orientation, and personal and institutional characteristics. Nurse faculty experienced moderate to high levels of role strain and the leading sources of role strain were associated with role overload and role conflict. Significant positive correlations

were identified between individual's role strain scores and level of education, clinical responsibilities, amount of time spent in clinical instruction, teaching in an undergraduate program, having role orientation incongruity with the dean or other supervisor, and being concurrently enrolled in a doctoral program. Hanna (2000) extended Mobily's work by examining the relationship of education reform factors to nursing faculty member's role strain scores. Her findings indicated that the combination of nursing reform factors, especially faculty restructuring, technology use, and interdisciplinary focus on role, predicted total role strain in undergraduate nursing faculty better than any one single factor and accounted for 43% of the variance in role strain scores. Role overload was the leading source of role strain with role incongruity creating moderate role strain. In contrast to Mobily, personal demographic characteristics were not significantly correlated with role strain.

Social Work Faculty

Within social work education, McMurtry and McClelland (1997) attempted to describe the faculty and administrative responses to increasing enrollments and fixed resources at U.S. and Canadian schools offering the master's of social work degree. The findings indicate that faculty members were involved in varying amounts of teaching, field work supervision, and research. Forty six percent of the respondents indicated that faculty morale was lower than 5 years before. Strobino and Singer (1997) and Seaberg (1998) support the previous study, and reported that MSW faculty spent on average 50

hour per week on work related activities. They tended to be satisfied with their workload, but wanted more time to devote to scholarship.

Physical Therapy Faculty

Though physical therapy faculty research has not examined role strain specifically, two studies stand out as relevant to the current proposal. Radtka (1993) published the results of a study examining the faculty turnover rates among APTA accredited education programs. Using a longitudinal design, Radtka compared personal demographic and institutional data to departure information on physical therapy faculty. The results indicated that 10 percent of the faculty turned over in a one-year period. Low, but significant correlations were found between years of experience, lower salary, and job stress. Harrison, Kelly, and Soderberg (1996) examined responses from pre-tenure faculty at physical therapy education programs. The results indicated that 83% of the junior faculty were satisfied with having taken an academic position, but reported feelings of lonelineness, tenure anxiety, heavy work loads, and the desire for more guidance from colleagues.

Medical and Dental School Faculty

The extent to which medical and dental school faculty experience role strain has not been examined. Research has indicated that physicians and dentists experience higher stress levels than the general population, but physicians and dentists that teach report lower levels of stress than those that do not teach (Rutter, Herzbert, & Paice, 2002). Factors identified as stress producers included the amount of teaching workload, the

length of supervision, the number of students, type of tasks, and number of support staff. Other contributing factors included emphasis on research and administrative workload, loss of teaching autonomy, role conflict, student assessment issues, rewards, job satisfaction, and resources. Sargent, Sotille, Sotile, Rubash, and Barrack (2004) indicated significant differences in stress symptomatology between orthopedic residents and faculty members. Faculty quality of life scores indicated low levels of burnout and low frequency of psychiatric symptoms. Overall scores indicated faculty were "very satisfied to extremely satisfied". Unfortunately, the sample size in this study was very small and was limited to a single institution. In another study examining the stress levels of psychiatrists, respondents indicated that teaching students caused them little or no stress (Rathod, et al., 2000). Though women academic physicians reported being promoted more slowly, having lower salaries, having higher pressures to choose when to have children, and having conflicts between being a wife and mother and having a career, they tended to have high job satisfaction rates (Robinson, 2003). Other research indicated that recognition from peers and students had a mitigating effect on physician-educators' level of stress (Wright, Kern, Kolodner, Howard, & Brancati, 1998). Rutter, Herzberg, and Paice (2002) speculated that physicians that teach may experience decreased job stress in comparison to non-teaching physicians as a result of increased autonomy over teaching methods, decreased isolation as a result of student-teacher interactions, increased self-esteem as a result of student attention, power, and a sense of helping patients beyond one's own professional practice.

While athletic training is an allied health profession, it is difficult to compare the work lives of physician educators and athletic training educators. They are similar in that faculty in both professions may be tasked with clinical responsibilities in addition to their teaching, administrative, and research loads. Yet the most glaring differences are in the level of prestige, salary, and autonomy. Most athletic training educators are involved in undergraduate education, while all physician educators are employed in post-graduate education in the United States. And finally, the settings differ significantly. Physician-academics are employed in hospital-based university medical centers or schools of medicine. They tend to have flexible systems for evaluating and promoting faculty members within clinical and research faculty tenure lines. For the most part, athletic training faculty, on the other hand, are employed within departments of health, physical education, and kinesiology. While this trend is changing, the departmental structures and expectations facing athletic training faculty may affect their stress levels as they negotiate role demands.

Kinesiology Faculty

Because athletic training faculty are employed in departments of kinesiology and have their historic tradition in physical education, it is appropriate to review faculty workload studies in this area. Daniel (1983) reported on the job satisfaction of Canadian physical education faculty and found that faculty that conformed to the traditional expectations of other university faculty in terms of courses taught and engagement in research were significantly more satisfied. Faculty members that were at least 51%

academic were significantly more satisfied with their promotional opportunities than subjects in other non-academic faculty roles. Kelley and Gill (1993) examined the burnout, stress appraisal, and personal/situational variables of collegiate teacher-coaches. In their study, the amount of social support, gender, years of experience, and stress appraisal were able to predict burnout among collegiate teacher-head basketball coaches at NCAA Division III and NAIA schools. Williamson (1993) in a qualitative study examining PE teacher education faculty reported that role ambiguity and stress were mitigated by five factors: 1) structure and job facilitation, 2) work tasks, 3) support systems, 4) evaluation and feedback, and 5) psychological states. O'Connor and MacDonald (2002) examined physical education teacher's identity and role conflict between the teaching role and the coaching role using a multiple case study method. They combined multiple in-depth interviews with field observations of coaching and teaching behaviors. They observed that among the cases examined, role conflict was mitigated by the ability of these individuals to move across contexts and to manage inconsistencies in positive and rewarding ways. The teacher/coaches were 1) able to seek out "complementarity" in their work as coaches and teachers and 2) attain a coherent sense of self in their work. These findings contradict the notion that multiple roles may be incompatible and in conflict rather than complementary.

History of Athletic Training Education and Reform

In order to understand the work life issues affecting athletic training educators, it is necessary to review the historical development of athletic training educational

programs and to discuss the most recent changes in athletic training accreditation. This history has had a direct influence on the work responsibilities required of athletic training faculty as teachers, scholars, administrators, and clinicians.

Development of NATA Approved Education Programs

As stated by Delforge and Behnke (1999), "the evolution of athletic training education in the United States is closely intertwined with the history and development of the National Athletic Trainers' Association (NATA)" (p. 53). From 1950 until the present, the NATA has progressively examined and continually updated the educational preparation of entry-level and graduate-level athletic trainers. Early efforts included the establishment of the Committee on Gaining Recognition, the development of NATA approved curriculums and majors, and the establishment of a national certification examination. In 1955, William E. "Pinky" Newell, the association's first Executive Director, established the NATA's Committee on Gaining Recognition to enhance the professional image of the athletic trainer and to ensure the profession's place within allied health and medicine. The committee sought professional recognition through two avenues: formalized undergraduate education and a national certification examination. In 1959, the NATA Board of Directors approved a list of courses for an educational program for athletic trainers. The courses recommended for inclusion were typically offered within the departments of physical education and health. As a result of employment trends, prospective athletic trainers were also encouraged to gain a teaching credential for secondary schools and to pursue the pre-requisites for physical therapy

programs (Delforge & Behnke, 1999). As the authors point out, "this early approach to education of athletic trainers is understandable, however, considering that the athletic training educator had not yet emerged on the academic scene" (p. 53). Sufficient numbers of faculty were not available to support stand-alone programs in athletic training.

During the 1960's, the NATA approved curriculum was in its infancy and poorly recognized outside of the association. An increasing emphasis on educating colleges and universities on the approved curriculum and increasing the professional image of the athletic trainer marked the decade. In 1968, the NATA Committee on Professional Advancement conducted a survey of colleges and universities on their interest and ability to offer a course of study for athletic training. The Professional Education Committee contacted department heads of schools listed with the American Association of Health, Physical Education and Recreation that also employed an NATA member on their athletics staff. Less than half of the department heads reported that they were aware of the athletic training curriculum approved by the NATA in 1959 (Miller, 1999). In response to this data, the association prepared and published a brochure outlining the benefits of employing an athletic trainer and the procedures and requirements for NATA approval. In 1969, through the work of the Subcommittee on Professional Education, subsequently renamed the NATA Professional Education Committee, four undergraduate athletic training education programs were evaluated and approved (Delforge & Behnke, 1999).

During this same time frame, the association, through the work of J. Lindsy McLean, chair of the Certification Examination Subcommittee of the Professional

Advancement Committee, began to move towards a national certification examination. To be eligible for certification by the BOC, candidates were qualified through 4 routes: graduation from an NATA approved undergraduate or graduate program, a time-limited grandfather clause allowing individuals "actively engaged" in the profession, an apprenticeship/internship under an athletic trainer, and graduates from physical therapy programs (Delforge & Behnke, 1999, Grace, 1999). The first certification examination offered in 1970 included two parts: a written examination assessing knowledge of the "Basic and Clinical Sciences" and a written and oral-practical examination assessing the "Theory and Practical Application of Athletic Training" (Grace, 1999).

The 1970's and early 1980's marked a period of significant growth in the number of approved athletic training education programs with few changes in the educational curriculums. The number of programs increased from 4 to 62 from 1969 to 1982 (Delforge, 1982). During this same time, the 1959 curriculum was revised to eliminate the requirements that programs include the pre-requisite courses for physical therapy schools and the granting of a secondary-level teaching credential in physical education or health (Delforge & Behnke, 1999). This movement towards a stand alone program in athletic training marked the transition from a quasi-profession towards a profession with its own specialized body of knowledge. It also set the stage for the requirement that all NATA approved curriculums offer athletic training as a major.

Competency-based Majors in Athletic Training

In contrast to the minimal revisions to the NATA approved curriculum in the mid 1970s, the 1980s served as a pivotal time frame for changes to the educational preparation and credentialing of athletic trainers. The transition to a recognized academic major, the development of standardized educational content guidelines, and the development of the certification examination based on a professional role delineation study marked this time frame in the profession's history. In 1980, the NATA Board of Directors approved a resolution requiring NATA approved undergraduate AT education programs to offer majors in athletic training by 1986. This date was subsequently delayed until 1990, but this requirement established an institutional mandate that athletic training be recognized as a major or major equivalent. The ability to designate a program as being a major equivalent provided flexibility to programs housed at institutions with rigid procedures for seeking approval for new majors. This caveat within the NATA approval, and subsequent CAAHEP and CAATE accreditation, standards remains a contentious issue. In 2005, the Athletic Training Degree Task Force recommended to the NATA Board of Directors that all entry-level programs be required to designated athletic training as the degree subject area by 2014 (NATA Degree Task Force, 2005). These current reform efforts in athletic training educational preparation and accreditation will be discussed later in this review.

In contrast to the course title based curriculum proposed in 1959, the 1983 *Guidelines for the Development and Implementation of NATA Approved Undergraduate Athletic Training Education Programs* emphasized the need to address specific subject

matter requirements and also ensure that program graduates were able to meet the *Competencies in Athletic Training* (Delforge & Behnke, 1999). The competencies were a new development within the profession to establish criteria for professional expertise in areas identified by the Board of Certification following the first role delineation study. This increasing complexity and specialization towards a major in athletic training and improved credentialing of candidates was met with approval by other professional organizations, most notably the American Medical Association (AMA). These reform efforts in the mid 1980's were the necessary steps in a lengthy process to prepare for an application by the NATA to have athletic training recognized as an allied health profession by the AMA and to seek accreditation by the Committee on Allied Health Education and Accreditation (CAHEA).

As the 1980's came to a close, it became increasingly apparent that athletic training was in a period of substantial growth, change, and recognition. The events which occurred in the 1990's had an even more notable impact on the preparation of athletic trainers and the education reform efforts which continue to be implemented in 2007.

External Recognition and Accreditation

On June 21, 1990, the AMA and its Council on Medical Education formally recognized athletic training as an allied health profession (NATA, 1990). With that recognition came the opportunity for the NATA to begin the application process for formal external accreditation of athletic training education programs by the Committee on Allied Heath Education and Accreditation (CAHEA). Following the formal

recognition by the AMA, it was necessary to form a regulatory agency separate from the NATA that would be responsible for directing and examining self-studies and conducting on-site reviews of athletic training programs. In response to CAHEA standards, the Joint Review Committee on Education of Athletic Training (JRC-AT) was established to make recommendations to CAHEA regarding accreditation decisions. In 1993, the NATA stopped approving entry-level educational programs. In February 1994, the first two athletic training programs were accredited by CAHEA (Delforge & Behnke, 1999).

The coexistence of CAHEA and the JRC-AT was short-lived, however. In the same year that the first two programs were accredited, CAHEA was reconstructed as the Commission on Accreditation of Allied Health Education Programs (CAAHEP), with the AMA as a cosponsor. All CAHEA accredited programs became CAAHEP accredited programs, and the JRC-AT was re-assigned to CAAHEP.

Again, paralleling previous decades, in the mid 1990s, as athletic training education was experiencing significant growth and change so too was the certification examination. By this time in the early 1990's, two routes were available for individuals wishing to sit for the BOC examination – 1) completion of an undergraduate program accredited by CAAHEP or an NATA approved graduate degree program in athletic training or 2) completion of an internship with a minimum of 1500 hours of experience under a certified athletic trainer and evidence of completion of a specified set of courses. The passing rate on all parts of the certification exam and the first time passing rate for internship candidates was significantly below the national average for curriculum candidates. There was also concern that the image and respect given to athletic trainers

was being hindered by the "on the job" training allowing individuals to sit for BOC certification (NATA, 1996). In response to these and other concerns, the NATA Board of Directors at the recommendation of the Professional Education Committee eliminated the completion of a graduate program as a method to qualify for eligibility for certification and created the Education Task Force (NATA, 1994).

The Education Task Force Reforms

The mission of the Education Task Force was to "evaluate the educational and professional preparation of the NATA certified athletic trainer." (NATA, 1995, p. 9). Following two years of work examining undergraduate preparation of examination candidates through curriculum and internship routes, examining the graduate preparation of certified athletic trainers, and professional continuing education, the Education Task Force made 18 recommendations to the NATA Board of Directors which were unanimously approved (NATA, 1997).

The most dramatic reform provision was the recommendation that by January 1, 2004 the internship route to certification be eliminated and all applicants for certification must graduate from a CAAHEP accredited program. According to one Task Force report (NATA, 1996), in the years 1993 and 1994, 573 institutions sponsored candidates for certification through the internship route and 84 institutions were accredited. This indicated a significant number of unofficial and unregulated programs preparing students to become athletic trainers. Between 1997 and 2004, over 250 programs applied for candidacy for accreditation in order to meet the BOC and CAAHEP deadline. In January

of 2006, there were over 338 programs accredited by the CAATE to offer an entry-level program for athletic training (Available for review at http://www.CAATE.net).

Between the 1997 announcement by the NATA Board of Directors and the 2004 deadline to sit for certification, there was a substantial increase in the number of athletic training faculty positions in response to the increased demand from educational institutions wishing to pursue accreditation (Fuller & Walker, 2004). Many have begun to speculate whether this exponential growth can be sustained or if the faculty members in these programs have the necessary clinical, administrative, and pedagogical skills to adequately prepare students and administer the programs while also meeting the institutional demands for tenure and promotion (Magnus, 1998; Kaiser & Durrant, 2001; Hertel, Buckley, & Denegar, 2001; Webster & Kopp, 2001; Fuller & Dewald, 2003; and Ingersoll, et. al, 2005).

The second major recommendation affecting athletic training faculty was the creation of the Education Council to oversee and direct the educational preparation of entry-level athletic trainers, graduate training for athletic trainers, and post-preparation educational programs. The Education Council was tasked with, and continues to be responsible for, evaluating and modifying the *Athletic Training Educational Competencies*. In 1999, the third edition of the competencies was published and it was mandated that all programs must implement the competencies by June 2002. This implementation timetable coincided with the requirement by the JRC-AT that the 2001 Standards and Guidelines be implemented by all entry-level athletic training programs.

With the revised NATA competencies and the revised JRC-AT Standards came several changes stemming from additional Educational Task Force recommendations:

1) the addition of pathology and pharmacology as educational domains in athletic training and subject matter areas,

2) a requirement that all programs develop systematic methods of assessing clinical proficiency rather than a reliance on "clock-hours" spent within a clinical setting – this in practice has become known as "learning over time",

3) a requirement that each athletic training program have a designated Clinical Instructor Educator (CIE) and that this faculty member implement a method of educating and credentialing approved clinical instructors (ACIs), and

4) a requirement that all students be provided with exposure to a general medical rotation through their clinical education to work with various allied health professionals and to be exposed to conditions beyond orthopedic and musculoskeletal injuries.

Each of these tasks created an additional layer of administration and coordination to the role of athletic training educator.

With the elimination of the internship route to qualify for certification by the Board of Certification (BOC) in 2004, an increased emphasis on athletic training related research, and the rigorous evaluation of educational programs for accreditation, the profession of athletic training has gained recognition and legitimacy as an allied health profession. Certified athletic trainers (ATCs) continue to expand their practice settings beyond the traditional clinical settings in high schools, colleges and universities, and professional sports. New graduates from accredited programs are expected to be able to pass the BOC examination and have the potential to work in a much more varied employment setting than their faculty members were exposed to in their education. ATC's are now employed in high schools, colleges, recreational sports settings, the

military, physician's offices, outpatient rehabilitation clinics, industrial and corporate work settings, and as entrepreneurs (NATA, 2005b).

While beneficial overall to the employability and educational preparation of athletic trainers, these reform efforts have also resulted in increased complexity to the academic preparation of athletic trainers and the role of athletic training educators. Athletic training faculty members at colleges and universities have also had to respond to the implementation of educational competencies which change every 5 years, changes to the criteria for structuring and evaluating clinical education, and most recently the proposed changes to the certification examination by the BOC (BOC, 2005). All of these changes have the potential to add substantial stress to athletic training educators.

A Second Wave of Reform and Change

As if the culture of change and reform during the late 1990s and first half of 2000's was not enough for athletic training faculty, there is currently a second wave of implementation deadlines approaching accredited programs from each of the three major regulatory agencies: CAATE, BOC, and the Education Council. In 2005 the Commission on Accreditation of Athletic Training Education released the *2005 Standards for the Accreditation of Entry-Level Athletic Training Education Programs*. These revised standards were to have been implemented by July of 2006. During this same year, the BOC began a transition from the on-site written, written simulation, and practical examinations to a computer-based examination process (BOC, 2005). The first administration of that exam is to take place in April of 2007. And finally, the Athletic Training Educational Competencies by the NATA Education Council underwent a fourth

revision, and the Entry-Level Education Committee changed the educational competencies and clinical proficiencies by which entry-level athletic trainers are evaluated (NATA, 2005a; NATA Entry-Level Education Committee, 2005). The tentative timetable for implementation requires that programs begin using the 4th edition Competencies in the 2007- 2008 academic year. Most recently, the Educational Degree Task Force made a recommendation to the Board of Directors that the minimum level of education for credentialing athletic trainers should remain at the baccalaureate level, but that by 2015 all institutions should have programs in place that designate athletic training as the degree area – a departure from current practice where students might earn any combination of degrees such as a degree in exercise and sports science with a concentration in athletic training. John Schrader (2005) stated it eloquently when he wrote,

> With our expanding areas of employment, a new role delineation by the BOC has necessitated different content construction of our exam that ultimately translates into new competencies and didactic content being added by JRC-AT to the athletic training curricula. This reinforcing cycle has occurred so rapidly there hasn't been any period of stability in our educational programs for almost a decade. (p. 16)

Collectively, these reform efforts and the speed of change have the potential to have a significant impact on faculty perceptions of their work as athletic training educators.

Characteristics of Athletic Training Educators

The most recent decade in athletic training education has witnessed substantial reform and growth and has resulted in increased recognition, legitimacy, and complexity to the academic preparation of athletic trainers and the role of athletic training educators. As the educational requirements of athletic training have changed, so too have the demands on athletic training faculty. Previous research on athletic training educators and athletic trainers in general indicates that these individuals typically have multiple job responsibilities in the classroom, in the laboratory, in the clinical environment, and in administration (Sciera, 1981; Perrin & Lephart, 1988; Leard, Booth, & Johnson, 1991; Foster & Leslie, 1992; Duncan & Wright, 1992; Winterstein, 1998; Perkins & Judd, 2001). Historically, faculty in athletic training began work as clinicians providing healthcare for college athletes while also educating future professionals in the classroom and in the clinical environment (Sciera, 1981). Examinations of stress in AT have focused on the role occupant, the role setting, and the role itself (Figure 1). No research has extended this examination to role stress and role strain.

As the demand for research productivity has grown both within the profession and in higher education, many athletic training faculty have added the responsibility of conducting scholarly work to address tenure and promotion requirements, to advance the knowledge base of the profession, and to align athletic training with other allied health professions. Unfortunately, the athletic training profession like other care-giving professions, has traditionally exhibited a significant amount of attrition and low job satisfaction related to workload, time commitments, low recognition and prestige, and

low salaries (Capel, 1990; Hendrix, Acevedo, & Hebert, 2000; Shapiro, 1989; Barrett, Gillentine, Lambreth, & Daughtrey, 2002).

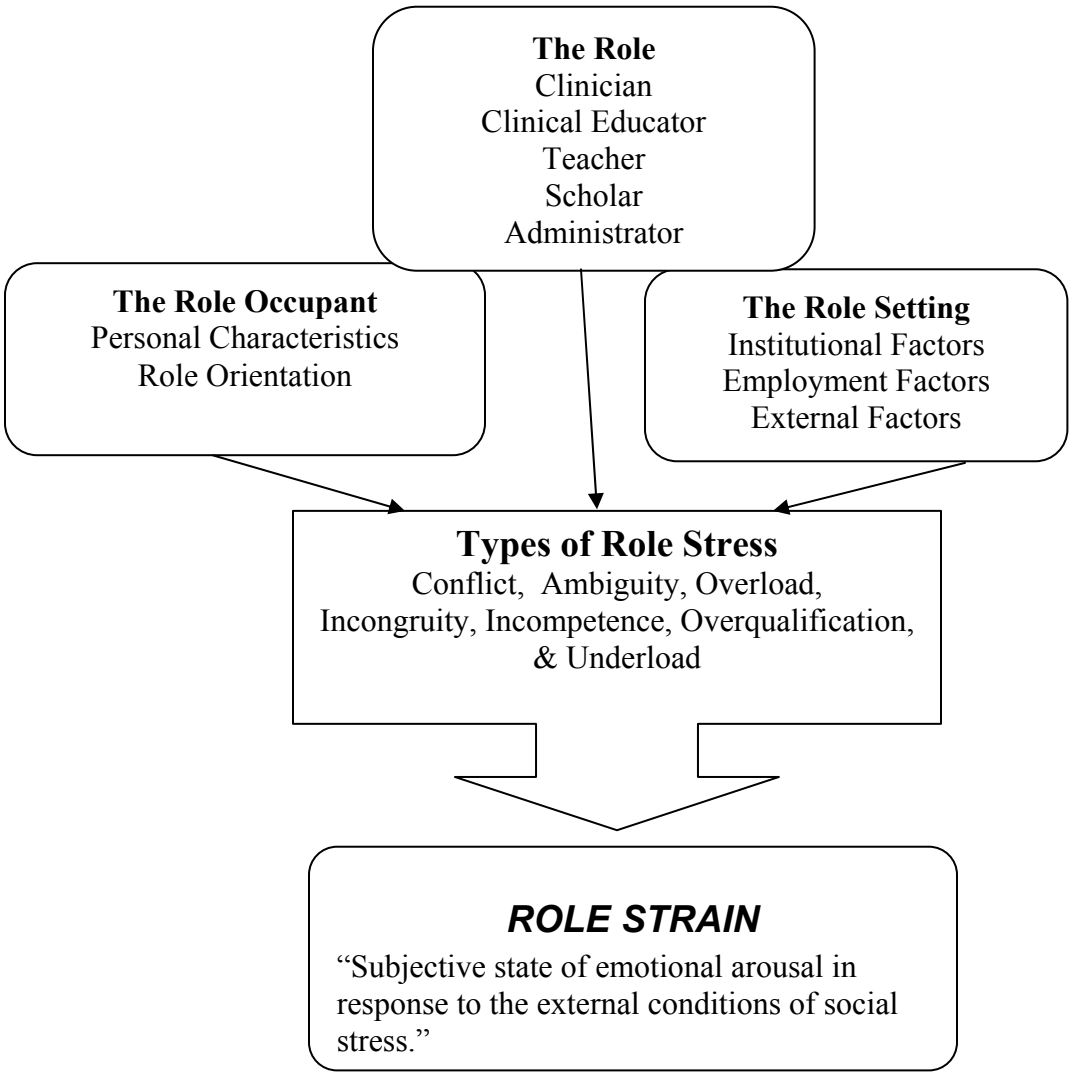
With the increase in demand for athletic training educators (Fuller & Walker, 2004), there is evidence to suggest that faculty have had a long history of concern about tenure and promotion issues at colleges and universities and are concerned about workload equity with other professors and clinicians (Perrin & Lephart, 1988; Leard, Booth, & Johnson, 1991; Magnus, 1998; Houglum, 1998; Perkins & Judd, 2001; Judd & Perkins, 2004; Ingersoll, et al., 2005). Research in this area has been conducted primarily through descriptive surveys designed to collect and correlate information from athletic training educators regarding scholarly productivity (Starkey & Ingersoll, 2001), workload and evaluation (Staurowsky & Scriber, 1998; Lepp, 2001; Perkins & Judd, 2001), and educational preparation and socialization (Leard, Booth, & Johnson, 1991; Foster & Leslie, 1992; Hertel, West, Buckley & Denegar, 2001).

Role Responsibilities

Sciera (1981) was one of the first to describe the athletic training program director's role within an NATA approved program. He argued that the Program Director typically was a dual role that administered athletic health care to student-athletes as well educated and supervised athletic training students. There was little mention in this initial examination of the roles of program directors towards the traditional responsibilities of faculty – teaching, research, and service. It can be argued that the program director was satisfying two traditional roles – those for teaching and those for service to athletics.

Figure 1.

Potential Sources of Role Stress among AT Educators.



Osternig (1988) noted that while athletic training had moved closer to the requirements of a profession in the areas of practice and education, research specific to the profession of athletic training was the "missing ingredient" and was developing more slowly by comparison. He advocated that research must take a more central role within

the profession to ensure its validation as an allied health profession. He also indicated that the dual responsibilities of program directors to practice athletic training and to educate students left little opportunity and time to engage in active research. The comments by Osternig concerning the competing emphases on clinical practice, program administration, and research have been supported by others (Perrin & Lephart, 1988; Weidner, 1989; Staurowsky & Scriber, 1998). Perrin and Lephart (1988) questioned whether it would be possible, and even feasible, to maintain a clinician role while navigating the requirements for program administration and also successfully navigating tenure and promotion guidelines.

Staurowsky and Scriber (1998) examined the workloads, compensation, and performance evaluations of program faculty. They concluded that program faculty had "worklives characterized by a diverse set of time-intensive responsibilities that universally include some combination of teaching, student supervision, service, and responsibility to athletic programs." (p. 248). Of the 153 athletic trainers employed at institutions with accredited programs, 70 percent reported occupying a faculty position. Of the respondents to the survey, 93 % reported working more than 40 hours per week with 16 % reporting in excess of 60 hours per week at work. Certified athletic trainers at accredited institutions indicated work responsibilities with some combination of teaching (40 %), service to athletics (30 %), and supervision of students (30 %). Program directors were evenly split between those with and those without athletic team responsibilities. Other additional responsibilities included advising and administrative responsibilities (budgeting, purchasing athletics supplies, and insurance).

When examining tenure and promotion related issues, 58 % of faculty respondents felt their institutions rated publications and presentations as important or very important. These individuals were fairly evenly divided among the importance given to athletic director's evaluations. Over 80% rated department chair or unit head evaluations and student evaluations as important or very important in their review for tenure and/or promotion. The reliance on academic department evaluations and relative indifference to athletic director's evaluation (though 30 % of the workload falls within the athletic department) indicates a "professional dilemma when athletic trainers are expected to perform in the traditional faculty model while completing other time-intensive athletic training duties" (Staurowsky & Scriber, 1998, p. 248). This indicates the potential for role stress in the form of role ambiguity (teacher versus clinician) and inter-sender conflict (department chair and athletic director). In response to the varying demands of athletic trainers working in accredited programs, the authors advocated exploring distinctions in workload and evaluation criteria between program directors, other faculty members, head athletic trainers, and staff.

Judd and Perkins (2004) examined athletic training program director's perceptions of work life issues to identify those areas that were most and least satisfying and those that were most and least beneficial to the work. Program directors identified student issues and discipline, administrative responsibilities, program management and support as the least satisfying aspects of the job and listed workload, professional expectations, and the lack of clinical/athlete involvement as least beneficial. The most satisfying and beneficial aspects of the program directors' position included involvement

in student growth and success and professional advancement. When asked about the intent to leave, respondents indicated that professional appointments, personal issues, child care/work-family issues, program issues, and career advancement were the primary reasons for leaving.

Most, if not all, athletic training educators began their careers as practicing athletic trainers in a "traditional" athletic department setting where they provided health care to athletes (Sciera, 1981; Leard, Booth, and Johnson, 1991). From the academic preparation as an athletic training student to the entry-level graduate assistant position, the certified athletic trainer is responsible for providing athletic training services. This clinical involvement with patients serves a dual purpose. It enables the novice certified athletic trainer to develop his/her own clinical skill while also providing opportunities for professional socialization with fellow colleagues, athletic training students, student-athletes, and others. As athletic trainers transition to the role of athletic training educator, there is the potential for role strain to develop as the role occupant learns the skills necessary to take on the new position.

Hertel, West, Buckley, and Denegar (2001) surveyed doctorally-trained athletic trainers to determine their perceptions of the competencies new doctoral graduates in athletic training needed upon graduation. The results indicated that doctoral -trained faculty felt it was most beneficial that new graduates be able to 1) teach at both undergraduate and graduate levels, 2) have administrative skills, 3) be able to advance the profession of athletic training through research and be able to conduct independent research projects, 4) mentor graduate students, and 5) provide leadership in academia.

Interestingly, several other competencies were identified as less important: 1) obtain funding through grants, 2) ability to conduct athletic training education research and 3) ability to perform clinical outcomes research. The recent editorials by Ingersoll, et al. (2005) expresses concern over recent trends to hire new graduates and "freshly minted PhDs" as program directors in the wake of significant expansion in the number of accredited entry-level athletic training programs. They argue separately that the time demands required of athletic training program directors, the political skills required of administrators, and the expectations of university and school administrators are factors that faculty members must consider when applying for positions within athletic training education programs.

Role strain has been shown to be highly correlated with job dissatisfaction among a variety of organizational settings (Jackson & Schuler, 1985). There is reason to believe, based on previous research, that athletic trainers in general suffer from burnout and exhibit moderate to high levels of job dissatisfaction (Geick, Brown, & Shank, 1982; Capel 1986, 1990; Shapiro 1989; Hendrix, Acevedo, & Hebert, 2000). This trend has not been supported, however, in studies examining job dissatisfaction among athletic training faculty (Perkins & Judd, 2001; Judd & Perkins, 2004).

Pilot Studies Examining Role Strain

In preparation for this study, two pilot study investigations were conducted. The first was a six-week qualitative focus group investigation with 10 (5 male and 5 female) athletic training educators. The second pilot study was to assess the reliability of the role

strain scale used in this study. In the first pilot study, role overload, role conflict, and role ambiguity were the most frequently described themes which arose during the focus group discussions. Other themes which were identified included age and gender related issues and family-work conflict. Of the 18 subjects responding to the second pilot study investigation of North Carolina athletic training educators, 11 percent of the subjects reported experiencing minimal role strain (total scale score less than 1.99 scale units), 38.9 percent reported low role strain (2.0 to 2.49 scale units), 16.7 percent of the subjects reported moderate role strain (2.5 to 2.99 scale units), and 33.3 percent of the subjects reported high role strain (3.0 or above).

Role overload (3.02 ± 0.74) was the only subscale to reach beyond 3.0 in scale units and be classified as a high level source of role strain. Role incongruity (2.72 ± 0.60) was identified as a moderate (2.5 to 2.99) level source of role strain. The remaining five sources of role strain were categorized as being low (2.0 to 2.49) level causes of role strain. (See Table 2).

By examining each of the original 48 items on the Role Strain Scale individually, one can examine and further identify the leading components of role strain among athletic training educators in North Carolina. Fifteen items were categorized as being high (3.0 or above) sources of role strain. There were five items related to role incongruity, six related to role overload, three related to intra-sender role conflict, and one related to inter-sender role conflict. The highest rated items were "Feeling torn between the demands of the profession and those of the institution.", "Receiving insufficient recognition for my clinical expertise", and "Feeling like I have too heavy a

workload; one that cannot possibility be finished during the normal work week". (See Table 3). Nine items were classified as being moderate (2.5 to 2.99) sources of role strain, 18 were classified as low (2.0 to2.49) sources of role strain, and six items were classified as being minimal (1.99 or less) sources of role strain.

Table 2.

Leading Components of Academic Role Strain among North Carolina Athletic Training Educators.

Source of Role Strain	Mean	SD
Total Role Strain	2.58	0.55
1. Role Overload	3.02	0.74
2. Role Incongruity	2.72	0.60
3. Intersender Conflict	2.41	0.66
4. Intrasender Conflict	2.41	0.63
5. Role Ambiguity	2.32	0.90
6. Inter-role conflict	2.31	0.77
7. Role Incompetence	2.11	0.72

Table 3.

Items Rated as High Sources of Stress during Pilot Study.

Item	Mean	SD	Subscale
1. torn between demands	3.44	1.149	Role incongruity
2. insufficient recognition for clinical	3.44	0.784	Role Incongruity
3. too heavy a workload	3.44	0.984	Overload
4. insufficient recognition for teaching	3.39	0.850	Role Incongruity
5. coping with number	3.39	0.778	Overload
6. physically drained from work	3.29	0.985	Overload
7. students who are inadequately prepared/poor motivation	3.28	0.895	Intrasender Conflict
8. quality of student and enrollment in conflict with profession	3.28	1.074	Intrasender Conflict
9. emotionally drained from work	3.22	0.808	Overload
10. progress is not what it should be	3.17	0.707	Role Incongruity
11. curricular changes	3.17	0.786	Intrasender Conflict
12. salary incongruent with performance	3.11	1.132	Intersender Conflict
13. insufficient recognition for service activities	3.06	0.938	Role Incongruity
14. amount of work	3.06	1.110	Overload
15. work outside regular work hours	3.00	1.188	Overload

Potential Consequences of Role Strain

These results are not unique to athletic training, but they do indicate that role overload, role incongruity, and role conflict are issues facing athletic training educators. Unfortunately, when an individual experiences burnout and job dissatisfaction, there is an increased possibility of leaving the profession and seeking out alternative opportunities. If ATC's in faculty positions choose to leave the profession prematurely, students are unable to gain exposure to seasoned professionals who have the benefit of experience and clinical expertise. Previous research on clinical education in athletic training has

indicated that role modeling, socialization, and the mentoring relationship have significant impact on the professional development of athletic trainers as well as other allied health professionals (Laurent & Weidner, 2001). Because athletic training faculty members and clinical supervisors are charged with the responsibility of developing the next generation of athletic trainers, it would serve the profession well to know that the faculty are presenting a desirable role model who is satisfied with his/her decision to pursue the profession, satisfied with his/her job, and able to balance the needs of the institution, the profession, and his/her own personal needs. In an editorial, Houglum (1998) wrote, "we are doing our students a dreadful disservice by sending them a very strong subliminal message that in order to be successful certified athletic trainers, they must work as many hours as we do…Our predecessors taught us these unwritten rules in an earlier time" (pp. 13). Her comments were intended to challenge the current status of athletic training education and to protect the image of the successful and the professionally satisfied certified athletic trainer. This positive role model would then encourage students to consider athletic training as a desirable profession and potentially minimize the high turnover rate exhibited among ATC's.

Finally, role strain could potentially impact the teaching ability of athletic training faculty and clinical supervisors. If a clinical instructor has competing roles and responsibilities, then he/she may not be able to adequately address the learning needs of the student and develop the student's clinical competence. In the case of tenure track faculty, the time balancing required to maintain excellence in teaching, a productive line of scholarship, and service to the university, the profession, and the community are also

potential sources of role conflict. These may be compounded by the requirements for maintaining accreditation and, in some cases, clinical practice.

No survey instrument for role strain has been developed and validated within the literature specifically for athletic training educators, therefore it was necessary to modify with permission an existing instrument that has been used in nursing education (Mobily, 1987). The professional preparations of nurses at the baccalaureate level and the educational programs for entry-level athletic trainers are similar in many ways. Nursing and athletic training students are instructed in the classroom by skilled and experienced faculty. The students are required to participate in laboratory and clinical practicum courses where skills and abilities are learned, practiced, and assessed. Faculty in both disciplines must prepare students through a variety of instructional methods, must engage with community-based patient populations and agencies, and must address both internal evaluation standards and external accreditation standards, mandates, and guidelines.

The diversity of faculty responsibilities in these two areas is also similar. Faculty members in both areas are often responsible for teaching and evaluating students both on- and off-campus, for conducting research and scholarly work, and for engaging in service activities for their respective institutions, communities, and professional organizations. Like many other professional preparation programs in higher education, nursing and athletic training also require faculty members to maintain professional competence in the clinical environment. In some cases, faculty members are required as part of their job descriptions to maintain a clinical practice and be actively engaged in patient care. In all cases, the faculty member is required to maintain their credential through continuing

education The common elements of these two faculty roles lend support to the exploration of modifying an instrument used previously in nursing for an examination of role strain in athletic training education.

Summary

In order for role strain to exist, a social structural condition must be present in which expectations and obligations are vague, irritating, or difficult to achieve. Pressures on faculty in general stem from revenue issues, competition for recognition, the organization of faculty work, governance issues, and accreditation. Additional sources of stress included the time pressures around tenure review, motivational characteristics of faculty, and overall workload. Health science faculty exhibited varying levels of role strain and occupational dissatisfaction. In athletic training, the development of entry-level educational programs and its subsequent reforms have had a significant impact on the work related responsibilities for faculty. Faculty in athletic training traditionally have exhibited challenges regarding their multiple role responsibilities, tenure and promotion criteria, and work-life balance. Pilot studies examining role strain indicated that athletic training faculty are facing role overload, role incongruity, and role conflict. Several factors were proposed as potential sources of role strain including education reform, institutional structure and departmental affiliation, and competing constituencies.

CHAPTER III

METHODS

This chapter describes the methods used in the collection and analysis of data for this investigation. The subject selection process, the timetable and methods for data collection, and the instruments used in this study are discussed. Statistical procedures used in analyzing the data and testing the research hypotheses are outlined.

Research Design

This research study was a Web-based, cross-sectional, descriptive design. Previous pilot study research indicated that electronic, Web-based surveying was a valid and reliable method for data collection.

Procedures

Request for IRB Approval

The study was reviewed and approved by the Institutional Review Board at the University of North Carolina at Greensboro before any data were collected (Appendix A). No modifications to the data collection process were requested by the IRB before data collection began.

Participant Recruitment

Athletic training faculty members affiliated with Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredited entry-level athletic training

education programs in the United States were contacted via e-mail and letter, and asked to participate in an electronic survey research study. Subjects were identified from the membership list provided by the National Athletic Trainers' Association (NATA).

The population of respondents for this study included all certified NATA members that indicated in their membership profile that they:

1. were currently employed in the college/university setting;
2. were primarily employed as either an academic/research faculty or dual appointment, and;
3. had a mailing address and e-mail address available for contact.

In order to qualify for participation, volunteer participants must have also:

a) been certified as an athletic trainer by the Board of Certification (BOC) for at least 1 year;
b) been identified as a member of his/her institution's full-time faculty;
c) instructed at least one classroom course or supervised two students during a clinical education course or fieldwork assignment during the current academic year.

Athletic training faculty with less than one year of certified athletic training experience may exhibit role strain unique to the novice professional and were therefore excluded from this investigation. In order to examine issues of role strain of full-time faculty, it was necessary to exclude individuals who may be classified as staff with adjunct or part-time faculty status. These positions typically do not have the same evaluation procedures or expectations of full-time faculty. Finally, in order to examine the influence of teaching

and clinical supervision, it was necessary to ensure that potential respondents had been engaged in some classroom teaching and/or clinical practice and supervision of clinical education during the current academic year. Individuals with entirely administrative assignments without teaching typically have different role expectations and therefore warrant examination outside of this study.

The sampling technique had been used previously to solicit membership names and e-mail addresses for athletic training faculty within North Carolina for pilot study work. As a result of significant changes to the instruments utilized during pilot study, previous participants were retained for inclusion in the full study.

Contact Design

Once the potential list of participants had been assembled, all individuals meeting the inclusion criteria were sent an initial e-mail asking for their participation and were directed to a web site address/URL inviting them to complete an on-line survey. Both a web link and the complete URL were imbedded within the e-mail for those individuals with HTML enabled e-mail clients and those only able to read plain text messaging (Appendix B). Individuals were asked to contact the principal investigator if they did not meet the inclusion criteria and were subsequently removed from further e-mail or ground mail communications.

Two weeks after the initial electronic call for subjects, the initial e-mail was re-sent to all potential participants as a second invitation to participate (Appendix B). At week 4, a follow-up letter was sent by ground mail to all potential participants encouraging their participation in the research (Appendix B). Finally, after 6 weeks, a

final electronic call for subjects was sent to all potential participants indicating a final deadline for participation following a total of 8 weeks of data collection (Appendix B).

Data Collection and Storage

Data collection was conducted via the World Wide Web and a server based data management system, PHP Surveyor version 0.99. PHP Surveyor (http://sourceforge.net) is an open source software program that enables users to create survey forms accessible via the web and securely store data on an institution or privately controlled database. Data were backed up daily to ensure access to the database and responses. Access to the database was secured via encrypted password entry. Only the principal investigator and the technical support personnel in the Department of Information Technology at Greensboro College had access to the files. A secondary backup set of the data was stored electronically on password protected CD-ROM.

Instruments

An electronic survey, based on the Academic Role Strain Scale (Mobily, 1991), a paper and pencil instrument, was distributed via the Internet (Appendix D). Respondents were asked to access the World Wide Web through a web browser (Internet Explorer, Netscape, Mozilla, etc.) and complete a series of five questionnaires: a personal demographics and employment questionnaire, an institutional questionnaire, the Academic Role Orientation Scale, and the Role Strain Scale – Athletic Training Educator version, and a series of five intent to leave questions. The survey was housed on the

principal investigator's institutional server. Participant's responses to the questionnaire were recorded anonymously using subject generated user identifications.

Personal, Employment, and Institutional Demographic Data

The items on the personal, employment, and institutional data questionnaires were developed using previously identified variables that may influence role strain, job satisfaction, and person-work fit among university faculty members (Appendix D). It has been proposed that role strain may be modulated by individual's anticipatory socialization experiences such as level and type of education and previous work experience, as well as by incumbency socialization experiences such as current employment and institutional characteristics.

Academic Role Orientation Scale

The Academic Role Orientation questionnaire was based on the work of O'Shea (1982), Zey-Ferrel and Baker (1984), and Mobily (1987). The assessment of role orientation delineates eight work orientations, which emphasize or de-emphasize each of the three primary academic responsibilities of teaching, research, and service. (See Table 4). For example, a Type I (Trs) orientation emphasizes teaching while research and service are less important. Subjects were asked to identify their ideal work orientation among the 8 possibilities. Subjects were then asked to identify their actual work responsibilities, the orientation that best meets the needs of the athletic training profession, the orientation which best represents the mission of the institution, their

supervisor's expected role orientation, their colleagues' expected role orientation, and the orientation which best represents their role models. (See Appendix D).

Table 4.

Typology of Academic Role Orientations.

Type	Academic Role Orientation	Description
Type I	TEACHING-research – service	Teaching is prime commitment; research and service are less important.
Type II	teaching – RESEARCH – service	Research is a prime commitment; teaching and service are less important.
Type III	teaching – research – SERVICE	Service is a prime commitment; teaching and research are less important.
Type IV	TEACHING-RESEARCH – service	Both teaching and research are significant and have equal importance; service is less important.
Type V	TEACHING – research – SERVICE	Both teaching and service are significant and have equal importance; research is less important.
Type VI	teaching – RESEARCH – SERVICE	Both research and service are significant and have equal importance; teaching is less important.
Type VII	TEACHING-RESEARCH – SERVICE	Extensive commitment in all three areas.
Type VIII	teaching – research – service	Minimal commitment in all three areas.

Individual's responses to the ideal role orientation question were compared to the remaining questions and were labeled as either congruent or incongruent with respect to actual job responsibilities, needs of the profession, institutional mission, supervisor's expectation, colleagues, and role models.

Academic Role Strain Scale -

Athletic Training Educator Version (RSS-ATE)

The Academic Role Strain Scale – Athletic Training Educator Version (RSS-ATE) consists of 55 -items describing potential sources of stress for athletic training faculty and 5 items which assess the individual's intent to leave their current role as an athletic training faculty member. The 55-items were modified with permission from Mobily's (1987) original 44-item scale developed as a paper and pencil instrument in her study of nursing faculty, socialization experiences, and role strain. The RSS-ATE uses a 5-point Likert-type scale from "Never" to "Nearly All the Time" to examine the perceived frequency of seven types of role strain among athletic training faculty: role ambiguity (7 items – 21, 22, 23, 36, 48, 49, 50); role overload (8 items - 1, 2, 3, 6, 10, 19, 24, 34, and 35); role incompetence (under-qualification) (6 items – 41, 42, 43, 44, 45, and 46); role incongruity (10 items - 7, 11, 12, 13, 14, 20, 25, 39, 40, and 55); and role conflict – intersender role conflict (4 items – 15, 37, 38, 53), intrasender role conflict (10 items -5, 8, 9, 17, 18, 26, 47, 51, 52, and 54), and inter-role conflict (9 items – 4, 16, 27, 28, 29, 30, 31, 32, and 33). Additional space was provided to allow individuals to write in additional sources of role stress and to rate its frequency of stress.

The total mean score on the first 55 items of the RSS-ATE, in raw scale units (1 to 5), serves as a global measure of role strain. The mean score on each of the 55 items within the instrument can also be examined individually to determine the leading sources

of role strain. The total mean score on each of the sub-scales can also be examined to determine the major areas of role stress ranked as most problematic by respondents.

The five intent to leave questions assessed the frequency with which an individual had contemplated 1) leaving their current institution, 2) leaving athletic training education but remaining in athletic training clinical practice, 3) leaving athletic training clinical practice but remaining in athletic training education, 4) leaving athletic training but remaining in academia in another capacity, and finally, 5) leaving both athletic training and academia to pursue other professional opportunities. The intent to leave has previously been identified as an indicator of job satisfaction and served as a dependent variable in this investigation (Hellman, 1997).

The total mean score on the RSS-ATE, in raw scale units, serves as a global measure of role strain, and was labeled "total role strain". The total mean score on each of the 55 items within the instrument can also be examined individually to determine the sources of role strain. The total mean score on each of the subscales can also be examined to determine the major areas of role stress ranked as most problematic by respondents.

Pilot Test Results

Two previous pilot study projects have been conducted by this investigator to explore the extent of academic role strain among athletic training educators. The first project was a qualitative analysis of academic role strain utilizing an on-line focus group and an initial examination of Mobily's (1987) Role Strain Scale for the purposes of revision towards an athletic training faculty audience. The second project examined the

feasibility of recruiting and disseminating the RSS-ATE via the Internet and calculated the inter-item reliability of the RSS-ATE using a pool of subjects from accredited programs in North Carolina. The results of both investigations are described below.

Pilot Study 1 – Focus Group Study

The purpose of the first pilot study was to examine and to describe the perceptions of faculty and clinical instructors (CI's) as they encounter, cope, and manage role strain in CAAHEP accredited programs. The study utilized on-line, asynchronous communication as a medium for qualitative, focus group research – a novel approach in athletic training research. A group of 10 ATCs, 5 males and 5 females, with at least one year of experience in clinical practice and clinical instruction and employed at CAAHEP accredited programs, volunteered to participate in the study. All three NCAA divisions and all degree granting Carnegie classifications were represented. Subjects were assigned pseudonyms to protect anonymity and confidentiality. Subjects participated in a 6-week series of semi-structured, asynchronous discussions via a Blackboard Learning Systems (Blackboard Inc., Washington, D.C.) on-line community. A constant comparative analysis method was used during data collection to generate follow-up questions (Glaser, 1965). Transcripts were read, indexed, and analyzed between each discussion board posting and at the conclusion of the study. The transcripts were coded against the seven subscales previously identified in the role strain literature. The most common themes were those related to role overload, role conflict, and role ambiguity. Two additional themes related to age/experience and parenting roles also emerged as

problematic among this group of educators. Results indicated that these faculty members and CI's experience varying degrees of role strain in their daily work. They have multiple role set members, experience role overload, and role conflict between academic, clinical, administrative, and personal life demands. Role incongruity, role overqualification, and role incompetence were not identified as key contributors to role strain in this focus group. Faculty and CI's with less than 10 years of experience expressed greater frustration and difficulty with role strain than their more senior colleagues.

At the completion of the six-week focus group, subjects were asked to complete a paper and pencil version of Mobily's Role Strain Scale, to provide comments on the appropriateness of the instrument for use among athletic training educators, and to recommend potential additions and changes. The results of this first pilot study were used to create the web-based version of the Academic Role Strain Scale – Athletic Training Educator

Pilot Study 2 –Feasibility and Reliability

The second pilot investigation was conducted to test the practicality of using a web-based electronic survey version of the RSS-ATE and to calculate its inter-item reliability. The contact design and subject selection procedures proposed in this investigation were utilized during the pilot test of North Carolina athletic training educators. Eighteen subjects (10 females and 8 males) participated in the study. During the initial launch of the subject recruitment, it was determined that the electronic link

imbedded in the e-mail call for subjects was incorrect. This was easily corrected and no further complications arose from recruiting, collecting, or storing the survey data.

An instrument is said to be reliable when it exhibits stability across various testing opportunities over time (test-retest reliability), equivalence between varying forms of an instrument (parallel forms reliability), or internal consistency across all items claiming to measure the same construct (split-half, Kuder-Richardson, or Cronbach's coefficient α reliability) (McMillan & Schumacher, 1993). Traits tend to be more consistent across time. Therefore, instruments that profess to measure traits such as personality, for example, should exhibit a high degree of test-retest reliability. According to role theory, role strain changes in response to the number and types of role demands, an individual's coping mechanisms, and the number of role set members. These factors could potentially affect the stability (test-retest reliability) of the instrument. Additionally, there is only a single form for the RSS, therefore it is neither possible nor necessary to calculate the parallel forms reliability or determine the instrument's equivalence. The most important reliability coefficients for this research, therefore, are the internal consistency measures for the causes of role stress and the overall scale. Also known as inter-item reliability, the internal consistency of an instrument is an appropriate measure to ensure that scale items are appropriately grouped together to assess a particular concept or area under investigation (Nardi, 2003). The Cronbach's coefficient α is calculated across all possible permutations of the split-half reliability of an instrument. It is a robust measure of internal consistency and is generally accepted as the most appropriate type of

reliability for survey research where there is a range of possible responses for each item (McMillan & Schumacher, 1993).

The coefficient α for the RSS had previously been established at 0.96 for the entire 44-item scale when given to nurse educators. The α coefficients for the sub-scales ranged from 0.58 to 0.85 (Mobily, 1987). This indicates a moderate to high level of consistency between item responses for nurse faculty exhibiting high levels of role strain as well as for those exhibiting low levels of role strain.

During pilot study work with North Carolina faculty, the coefficient α for the entire 48-item scale was 0.95. The α coefficients for the sub-scales ranged from 0.35 to 0.88. This indicated a range of consistency between item responses for athletic training faculty exhibiting high levels of role strain and those exhibiting low levels of role strain. (See Table 5).

At the time of the second pilot study, the inter-role conflict reliability coefficient was the lowest among all sub-scales at 0.35. It was also the sub-scale with the fewest items at four. This can adversely affect the calculation of the inter-item reliability (Gay & Airasian, 2000). In response to those findings, four additional items were added to the inter-role conflict sub-scale to address the role conflicts that exist between athletic training clinician and instructor. The four items initially on the sub-scale addressed work demands competing with other personal demands, as well as the conflicting priorities for teaching, research, and service. Unique to many athletic training educators, however, is their role as educators, administrators, and clinicians. The demands of athletic department priorities (practice coverage, competition coverage, health care issues, and

personnel issues) can potentially conflict with the academic responsibilities of the athletic training educator (student supervision and evaluation, course preparation, research, administration, and service). This is potentially greatest for those individuals holding both Program Director and Head Athletic Trainer responsibilities. These individuals typically have two supervisors, the Athletic Director as well as the Department Chair. Therefore, five additional items were added to the inter-role conflict scale increasing the total number of items on this sub-scale to nine. This is comparable to the other subscales on the RSS-ATE.

Table 5.

Cronbach's Coefficient α for the Pilot Version of the RSS-ATE.

Scale	Number of Items	Coefficient α
Total Role Strain	48	0.95
Subscales		
Intersender Conflict	5	0.75
Intrasender Conflict	9	0.71
Inter-role Conflict	4	0.35
Role ambiguity	7	0.88
Overload	8	0.86
Role Incongruity	10	0.83
Role Incompetence	5	0.82

Statistical Analyses

The subject's responses were exported from the on-line data management server using comma delimited (.CSV) coding and converted into a dataset using an Excel spreadsheet (Microsoft Corporation). The data were then converted and entered into the Statistical Packages for the Social Sciences (SPSS) version 13.0. Descriptive statistics of central tendency and frequency distributions were calculated for all personal and employment demographic data and institutional characteristics.

To verify reliability of the RSS-ATE, Cronbach's coefficient α (alpha) was calculated to determine the Role Strain Scale's internal consistency and stability across subjects. The coefficient α was also calculated for each of the seven subscales.

In order to answer the first research question under investigation, the sample mean and standard deviation of total role strain and subscales scores were calculated to identify cut-points and to categorize individuals as having high, moderate, low, and minimal role strain. Using the method proposed by Mobily (1991), these four categories were established around the combined mean values and the standard deviation for the RSS-ATE across all subjects.

In previous pilot study work on athletic trainers in NC, one standard deviation above and below the mean, and rounding to the nearest tenth, created the following categories:

High degree of role strain: mean score = 3.0 or above

Moderate degree of role strain: mean score = 2. 5 to 2.999

Low degree of role strain: mean score = 2.0 to 2.499

Minimal degree of role strain: mean score = 1.99 or below

This method was repeated with the full set of total role strain data. In order to determine the leading components of role strain, the combined means of all subjects' responses on each subscale as well individual scale item means were rank ordered from highest to lowest.

In an effort to examine the personal, employment, and institutional characteristics that influence academic role strain, several one-way analyses of variance (ANOVA) were calculated to determine significant differences between subjects.

To examine the influence of academic role orientation and academic role orientation congruency, subject's responses on the RSS-ATE and its subscales were compared between groups using ANOVA.

In each analysis, the total role strain and the subscale means served as the dependent variables. Personal categorical data, institutional categorical data, and academic role orientation served as the independent variables. When a significant *F* test was identified, a Tukey's LSD post-hoc analysis was conducted to determine between group differences.

In addition to the analyses described above, Pearson product correlations were calculated to determine the strength of the relationship between hours worked and the amount of role strain reported by faculty.

CHAPTER IV

RESULTS

This chapter presents the statistical analyses examining academic role strain among AT educators. The chapter begins with a description of the sample size and the response rate, the description of the sample, the reliability analysis of the RSS-ATE, the distribution of role orientations, and the distribution of AT faculty member's intent to leave. The remainder of the chapter presents the results of the research questions: degree of role strain and leading components of role strain, relationships between personal, employment, and institutional characteristics and role strain, relationships between role orientation and role strain, and the relationships between role strain and intent to leave.

Sample Size and Response Rate

The membership list initially provided by the NATA contained 1,499 potential participants with available e-mail and mailing addresses. These were BOC certified athletic trainers that indicated in their NATA membership profiles being primarily employed in either an academic/research position or as a dual appointment position at the university/college level. This initial pool of potential subjects was narrowed by several steps to determine the number of qualified, eligible subjects. First, in all communications with potential participants (both electronic and paper), individuals were asked to contact the investigator if they were not eligible for participation. Seventy (70) individuals responded and indicated they were not eligible. Second, each membership entry was

examined for their listed place of employment and compared against the CAAHEP accredited program listing. Two hundred and ninety nine (299) individuals employed at non-accredited institutions were classified as ineligible and removed from the eligible participants list. An additional 293 individuals did not have a listed place of employment and were therefore retained within the potential pool of subjects. This resulted in a net pool of 1,130 eligible participants.

Following 8 weeks of data collection, 255 responses were received. Five respondents did not meet the employment criteria, having indicated being employed as part-time or adjunct faculty member, as a graduate assistant, or not a faculty member at all. These individuals were also removed from the eligible participants list. Thus 250 responses were received from a potential pool of 1125 eligible participants yielding a response rate of 22.57 percent.

Description of the Sample

Personal Demographics

Two hundred and fifty (n=250) individuals participated in this study. A summary of the personal demographics of the sample is shown in Table 6. The participants ranged in age from 23 to 64 years with a mean of 37.31 ± 8.85 years. The participants had varying years of experiences as certified athletic trainers ranging from 2 years to 36 years with a mean of 15.02 ± 8.21 years of certified work experience.

Table 6.

Demographic Characteristics of Participants.

Characteristic		n	%
Gender			
	Male	128	51.2
	Female	122	48.8
Marital Status			
	Single	76	30.4
	Married	162	64.8
	Divorced	12	4.8
Age by Group			
	20 to 29	48	19.2
	30 to 39	115	46.0
	40 to 49	56	22.4
	50 to 59	28	11.2
	60 or above	3	1.2
Children/Dependents			
	None	121	48.0
	One or more	129	52.0
Route to BOC Certification Exam			
	Internship	134	53.0
	Curriculum	116	47.0

Educational Background

Table 7 presents the frequency table for the respondent's highest level of education. The majority of respondents (n= 163, 65.3 %) indicated having a master's degree as their highest degree completed. Of the respondents indicating a Masters as their highest degree, 28.8 % (n=47) indicated being currently enrolled in a doctoral program. Of those 47 individuals, just over half (n=24, 51.1 %) were enrolled in an Ed.D. program, followed by the Ph.D. (n=20, 42.6 %).

Table 7.

Highest Level of Education.

Degree Completed		n	%
Doctorate		87	34.4
	Ph.D.	46	18.4
	Ed.D.	31	12.4
	Other	10	4.0
Masters		163	65.2
	Science	90	36.0
	Arts	19	7.6
	Education	39	15.6
	Athletic Training	7	2.8
	Physical Therapy	1	0.4
	Other	3	1.2

The range of disciplines at the doctorate level and at the master's level was wide-ranging. Tables 8 and 9 lists the fields of study represented.

Table 8.

Athletic Training Faculty Fields of Study – Doctorate.

Field of Study	
Administration and Teaching	Health Care Education
Adult and Higher Education	Health Education
Adult Continuing Education	Health Promotion
Biomechanics	Health Science
Business	Higher Education Administration
College and School Health Education	Human Performance
Counseling and Student Development	Kinesiology
Curriculum and Instruction	Leadership
Curriculum and Leadership	Measurement and Evaluation
Curriculum Instruction & design	Motor Behavior
Curriculum Studies	Orthopedic Physical Therapy
Curriculum Theory and Cultural Studies	Physical Education
Education	Physical Medicine and Rehabilitation
Educational Administration/ Higher Education	Recreation
Educational Leadership	Safety/Prevention/Health Sciences
Exercise and Sport Science	Sport Chiropractic
Exercise Physiology	Sport Management
FCSE & Adult Education	Sport Psychology
Growth and Development	Sports Medicine

Table 9.

Athletic Training Faculty Fields of Study - Masters Degree.

Fields of Study	
Adaptive Physical Education	Guidance and Counseling
Administration	Health
Adult and Community College Education	Health & Safety
Athletic Injury Management	Health and Exercise Science
Athletic Training	Health and Human Performance
Athletic Training Education	Health Education
Biology	Health Physiology
Biomechanics	Health Promotion
Business	Health Science
Cardiac Rehabilitation	Health Studies
Classroom Instruction	Higher Education
Community Health Education	Human Performance
Curriculum and Instruction	Instructional Technology
Curriculum and Instruction	Interdisciplinary
Curriculum and Program Development	Sport and Exercise Psychology
Curriculum Study in Post Secondary Ed.	Sport Administration
Education Administration	Sport Fitness Management
Education Teaching and Learning	Sport Management
Exercise and Movement Science	Sport Psychology
Exercise and Sport Science	Sports Administration
Exercise Physiology	Sports Health Care
Exercise Science	Sports Medicine
Exercise Science and Adult Fitness	Therapeutic Kinesiology

When examining the responsibilities and anticipatory socialization experiences that occurred during these educational degrees, 19.3 % (n=17) of respondents indicated having completed a research assistantship while enrolled in the doctoral program, compared with 5.6 % (n=9) of respondents at the Master's level. Of those respondents having completed the doctorate, 44.3 % (n=39) indicated having completed a teaching assistantship, compared to 27.5 % (n=44) at the Master's level. The majority of respondents (67.5 %, n=108) indicated having completed a clinical assistantship while enrolled at the Master's level compared to 15.9 % (n=14) at the doctorate level.

Employment Characteristics

Items examining employment characteristics included length of time at current institution, length of time in AT education, rank and tenure status, administrative title/appointment, teaching loads, hours worked per week, and distribution of workload. Table 10 presents the frequency distribution of the employment characteristics. Of those individuals that were on continuing/renewable or tenure track contracts, 67.8 % indicated having a one year contract.

Table 10.

Employment Characteristics of Participants.

Characteristics	n	%
Years at current institution		
0 – 4	129	51.6
5– 9	64	25.0
10 – 14	22	8.8
5 – 19	16	6.4
20 +	19	7.6
Years in AT education		
0 – 4	95	39.0
5 – 9	74	30.2
10 – 14	29	11.6
15 – 19	19	7.6
20 +	28	11.2
Rank		
Instructor/Lecturer	87	34.9
Assistant Professor	88	35.3
Associate Professor	38	15.3
Full Professor	15	6.0
Other	21	8.4
Contract Status		
Tenured	40	16.0
Tenure-Track	66	26.4
Continuing/Renewable Contract	130	52.0
Non-renewable Contract	6	2.4
Non-Contract	8	3.2
Union/Collective Bargaining Membership		
Member	49	19.6
Non-member	193	78.8
Ineligible	8	3.2

Note: N=250

Administrative Responsibilities

Respondents were asked to indicate their current administrative title(s) in relationship to the accredited entry-level program. Respondents were allowed to indicate all of their responsibilities including academic administration as well as clinical practice administration. (See Table 11 for the distribution of administrative appointments). Titles and responsibilities were not mutually exclusive, therefore, it was expected that certain individuals would carry multiple responsibilities.

Table 11.

Frequency Distribution of Administrative Titles.

Title	n	%
Program Director	96	38.4
PD Only	59	23.6
PD/CC	15	6.0
PD/HAT	6	2.4
PD/HAT/CC	2	0.8
PD/Department Chair	14	5.6
Clinical Coordinator only	53	21.2
Head Athletic Trainer only	26	10.4
Department Chair only	3	1.2
Non-Administrative Appointment	72	28.8

Note: PD=Program Director; CC=Clinical Coordinator; HAT=Head Athletic Trainer

Work Load

The athletic training faculty in this study worked an average of 53.92 ± 11.42 hours per week, ranging from 25 hours per week to a maximum of 100 hours per week. Table 12 presents the frequency distribution of teaching load per academic year. The number of credit hours taught per year was normally distributed. In comparison to their colleagues, AT faculty report teaching fewer credit hours per academic year.

Table 12.

Average Teaching Load per Year.

Number of Credit Hours	Individual		Colleagues	
	n	%	n	%
1 – 5	15	6.0	4	1.6
6 – 10	56	22.4	31	12.4
11 – 15	72	28.8	53	21.2
16 – 20	66	26.6	50	20.0
21 – 25	32	12.8	90	36.0
26 or more	6	2.4	9	3.6

Respondents were also asked to quantify the percentage of time they would ideally like to allocate and the percentage of time they actually allocate to teaching, research, service, departmental administration, clinical practice, and travel. Two hundred

and sixteen respondents answered this item on the instrument. The mean percentages of time spent in each area of professional work are presented in Table 13.

Table 13.

Percent of Time Spent in Professional Work Areas.

Work related areas	Ideally			Actually		
	Range	M	SD	Range	M	SD
Teaching	0 – 100	46.44	19.04	0 - 100	46.66	20.45
Research	0 – 70	10.72	12.92	0 – 50	7.25	12.14
Service	0 – 60	11.93	1.79	0 – 75	12.25	11.45
Clinical Practice	0 – 90	16.53	19.49	0 – 80	15.91	21.34
Travel	0 – 50	2.41	6.158	0 – 60	3.00	6.33
Departmental Administration	0 – 100	12.49	13.42	0 – 75	14.88	15.32

Note: n=216

*Institutional Characteristic*s

Items examining institutional characteristics included funding source/affiliation, Carnegie classification, school and departmental affiliation, and athletic affiliation. Institutions were evenly divided between public and private funding sources. Fifty two percent (n=130) of the respondents were employed in programs sponsored by publicly funded institutions in comparison to the 120 individuals employed by private institutions.

Respondents were asked to indicate their institution's 2005 Carnegie Classification. Among the 10 categories, nine were represented. Table 14 shows the frequency distribution of institution types across all classifications. In order to analyze the data into more meaningful units, the Carnegie Classifications were collapsed into 4 categories: Doctorate-granting Universities, Master's Colleges and Universities, Baccalaureate Colleges, and Special Focus institutions. Fifteen respondents did not answer the item on the questionnaire.

Table 14.

Distribution of Respondents by 2005 Carnegie Classifications.

Title	n	%
Doctorate-granting Universities	66	26.4
Very High Research	24	9.6
High Research	23	9.2
Research	19	7.6
Master's Colleges and Universities	105	42.0
Large Programs	43	17.2
Medium Programs	31	12.4
Small Programs	31	12.4
Baccalaureate Colleges	63	25.2
Arts & Sciences	48	19.2
Diverse Fields	15	6.0
Baccalaureate/Associate's	0	0.0
Special Focus Institutions	1	0.4
Not Responding	15	6.0

In order to examine the influence of institutional and departmental affiliation, respondents were asked to indicate the school and the department in which the AT education program was housed. The responses were extensive and diverse. (See Tables 1 and 2 in Appendix D). The school affiliation responses were re-coded and collapsed into 7 categories represented by HPER (Health, Physical Education, and Recreation), Education, Arts and Sciences, Professional Studies, Allied Health/Medicine, Hybrids and Not Applicable. As expected, 24.4 % of the respondents indicated that their institutions did not organize departments by school. These were primarily individuals employed at smaller Baccalaureate Colleges that typically are organized around the departmental or division unit. Among those institutions using school arrangements, the most prevalent category was Education (19 %), followed by HPER (15.2 %) and Arts and Sciences (14.8 %). (See Table 15).

Table 15.

Distribution of Respondents by School.

School	n	%
Allied Health/Medicine	32	12.8
Arts &Science	37	14.8
Education	48	19.2
HPER	38	15.2
Professional Studies	8	3.2
Hybrids	26	10.4
Not applicable	61	24.4

Note: HPER = Health, Physical Education, and Recreation

With regard to department affiliation, again the diversity of names and titles was extensive. (See Table 2 in Appendix D). The departments were re-coded and collapsed into 5 categories represented by Kinesiology, Education (not physical education), Natural Sciences, Health Sciences, and stand alone athletic training departments. Table 16 shows the frequency distribution of respondents by departmental affiliation. The majority of ATEPs are housed within departments affiliated with Kinesiology and/or the sub disciplines of Human Performance (69.2 %, n=173).

Table 16.

Distribution of Respondents by Department.

Department	n	%
Athletic Training	26	10.4
Education	20	8.0
Health Sciences	20	8.0
Kinesiology	173	69.2
Natural Sciences	7	2.8
Not Responding	4	1.6

Program Characteristics

Items examining program specific characteristics included the length of time the program had been accredited, the amount of time pending re-accreditation, and the program size. The distribution of the number of respondents and the amount of time pending re-accreditation at their respective institutions are presented in Table 17. This corresponds with the typical 5 year accreditation cycle by CAAHEP, and now CAATE.

In an effort to examine the influence of program size, respondents were asked to complete a series of questions related to the institution's athletic affiliation and the size of the athletics program, the number of athletic training education faculty and staff members, the number of off-campus clinical sites, and the number of students. Table 18 presents the athletic affiliation distribution. The mean number of sports teams covered by athletic departments affiliated with accredited institutions was 16.21 ± 4.90 teams. There were a significant number of institutions that did not provide athletic training coverage to any club or intramural team (77.6 %, n=194), while those that provided athletic training coverage (22.4 %, n= 56) did so to differing quantities of intramural and club sport programs. The number of club teams provided athletic training coverage ranged from 1 to 400 teams with a mean of 8.43 ± 8.84.

Table 17.

Distribution of Program Accreditation Characteristics.

Accreditation Characteristic	n	%
Time to Re-accreditation		
Currently under review	26	10.4
1 year	27	10.8
2 years	44	17.6
3 years	44	17.6
4 years	35	14.0
5 years	22	8.8
6 years	9	3.6
Not sure	15	6.0
Not reporting	28	11.2
Length of Time Accredited		
Less than 5 years	94	40.3
5 years to 10 years	76	32.6
10 years or more years	63	27.0
Not reporting	17	7.3

Table 18.

Distribution of Sponsoring Institution's Athletic Affiliation.

Athletic Association/Division	n	%
NCAA		
Division I-A	63	28.3
Division I-AA	25	11.3
Division II	4	1.6
Division III	56	25.2
NAIA	74	33.3

Several items explored the diversity in staffing, size, affiliations, and enrollment among athletic training programs. The results of the items examining the number of ATC's on staff with part-time/adjunct faculty status, non-faculty status, and part-time/graduate assistant status are presented in Table 19. The median number of students per faculty member was 9.5.

Table 19.

Mean Number of Faculty, Staff, Students, and Clinical Sites Per Institution.

Program Size Variable	Range	Mean	±SD
On Campus Characteristics			
Full-time Faculty ATCs	1 –15	3.02	2.31
Adjunct Faculty ATCs	0 – 12	2.19	2.15
Full-time Staff ATCs	0 – 28	2.65	3.04
Part-time/GA ATCs	0 – 18	2.06	2.97
Number of Students	3 – 160	28.39	19.08
Faculty/Student Ratio	0.75 – 160	13.61	14.89
Off Campus Characteristics			
Number of ACIs	0 – 49	6.96	7.99
Number of Affiliated Clinical Sites	0 – 46	6.94	6.13

Reliability Analysis – RSS-ATE

To analyze the internal consistency of the instrument, the reliability of the RSS-ATE and the subscale items was measured using Cronbach's coefficient alpha. Coefficient alpha estimates the internal consistency of the instrument using only one test administration (Gay & Airasian, 2000). Alpha reliability coefficients were obtained for the 55 items on the role strain scale and each of the subscales. The alpha coefficient for

the total scale was = 0.948. The alpha coefficient for the subscales are presented in Table 20.

Table 20.

Cronbach's Coefficient α for the RSS-ATE and Subscales.

Subscale	Coefficient α
Total Role Strain Scale	0.948
Role Overload	0.897
Role Conflict	
Inter-Role Conflict	0.741
Intra-Sender Role Conflict	0.712
Inter-Sender Role Conflict	0.789
Role Incongruity	0.847
Role Ambiguity	0.908
Role Incompetence	0.730

Academic Role Orientation

Respondents were asked to indicate the academic role orientation that represented how they ideally would like to spend their work time (ideal orientation), and the orientation which represented how they actually spend their work time (actual orientation). (See Table 21).

A chi-square goodness of fit test on the role orientation data indicated a significant difference in the distribution of the respondents across ideal role orientations χ^2 (6, N=244) = 292.11, $p < 0.001$, and actual role orientation, χ^2 (7, N=247) = 447.12, $p < 0.001$. The respondents to this study were more likely to report a Type V (TrS) role orientation than other types.

Table 21.

Frequency Distribution of the Role Orientation Questionnaire.

Role Orientation	Ideal	Actual	Institution	Needs of the Profession	Supervisor	Colleagues	Role Models
I - Trs	69 (27.6%)	70 (28)	49 (19.6)	41 (16.4)	67 (26.8)	61 (24.4)	39 (15.6)
II - tRs	3 (1.2)	4 (1.6)	14 (5.6)	1 (0.4)	12 (4.8)	14 (5.6)	9 (3.6)
III - trS	12 (4.8)	20 (8.0)	3 (1.2)	1 (0.4)	14 (5.6)	20 (8.0)	4 (1.6)
IV - TRs	27 (10.8)	10 (4.0)	32 (12.8)	29 (11.6)	27 (10.8)	44 (17.6)	30 (12.0)
V - TrS	112 (44.8)	126 (50.4)	107 (42.8)	87 (34.8)	87 (34.8)	79 (31.6)	86 (34.4)
VI - tRS	1 (0.4)	3 (1.2)	1 (0.4)	3 (1.2)	2 (0.8)	3 (1.2)	3 (1.2)
VII - TRS	19 (7.6)	11 (4.4)	4 (16.0)	86 (34.4)	33 (13.2)	22 (8.8)	65 (26.0)
VIII - trs	0 (0%)	3 (1.2)	1 (0.4)	0 (0.0)	1 (0.4)	0 (0.0)	1 (0.4)

Note: Capitalization indicates that the work area is prime commitment and important
Note: T = Teaching, R = Research, S = Service
Note: All values are reported n (%).

Role Orientation Congruency

Previous research has indicated that the degree to which an individual's ideal role orientation matches with the role orientations of his/her role set members may contribute to perceived conflict and stress in the workplace (Mobily, 1991). To investigate the impact of role orientation congruency, each respondent's ideal role orientation was compared with their actual role orientation as well as the other role orientation questions. If the ideal role orientation matched the individual's actual role orientation, then the response was coded as being congruent. If the ideal did not match the actual role orientation, then response was coded as incongruent. Similar analyses were examined with regards to ideal -institutional congruency, ideal- supervisor congruency, ideal - colleagues congruency, ideal-profession, and ideal-role model. Table 22 presents the results of the ideal role orientation congruency analysis.

A second analysis was conducted to examine the influence of an individual's actual role orientation and its congruency with the perceived role orientation of other role set members. Again, if the actual role orientation matched the individual's ideal role orientation, then the respondent was coded as being personal congruent. If the actual did not match the ideal role orientation, then respondent was coded as personal incongruent. Similar analyses were examined with regards to actual-institutional congruency, actual - supervisor congruency, actual - colleagues congruency, actual-profession, and actual-role model.

Table 22.

Frequency Distribution of Ideal and Actual Role Orientation Congruency.

Orientation Congruency	Congruent		Incongruent	
	n	%	n	%
Personal (Ideal – Actual)	107	42.8	143	57.2
Ideal-Institutional	113	45.2	137	54.8
Actual-Institutional	115	46.0	135	54.0
Ideal-Supervisor	112	44.8	138	55.2
Actual-Supervisor	138	55.2	112	44.8
Ideal-Colleagues	77	30.8	173	69.2
Actual-Colleagues	104	41.6	146	58.4
Ideal-Profession	102	40.8	148	59.2
Actual-Profession	84	33.6	166	66.4
Actual-Role Model	90	36.0	160	64.0
Ideal-Role Model	99	39.6	151	60.4

Intent to leave

Five questions were asked to ascertain the frequency with which AT educators were considering the possibility of leaving their institutions, leaving their affiliation with

education and/or clinical practice, leaving their careers as AT educators, and leaving higher education altogether. (See Table 23).

Table 23.

Frequency of Considering the Possibility of Leaving.

Question	Never	Rarely	Sometimes	Frequently	Nearly All the Time	No Response
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Leaving my current institution	49 (19.6)	69 (27.6)	76 (30.4)	28 (11.2)	17 (6.8)	11 (4.4)
Leaving AT Ed/ Remain clinical	83 (33.2)	71 (28.4)	60 (24.0)	21 (8.4)	5 (2.0)	10 (4.0)
Leaving clinical/ Remaining AT Ed	74 (29.6)	47 (18.8)	42 (16.8)	24 (9.6)	12 (4.8)	22 * (8.8)
Leaving AT Ed/ Remain in Higher Ed	91 (36.4)	41 (16.4)	58 (23.2)	30 (12.0)	4 (1.6)	26 (10.4)
Leaving AT Ed & Higher Ed	104 (41.6)	47 (18.8)	41 (16.4)	9 (3.6)	7 (2.8)	42 (16.8)

Note: * 29 respondents indicated that this question was not applicable, 11.6 %.

Degree of Role Strain and Leading Components of Role Strain

Total role strain was defined as the mean score, as measured in scale units, on the 55 items of the Role Strain Scale of the questionnaire. Scores on this section had a possible range in scale units from 1 (never) to 5 (nearly all the time). In order to determine the degree of role strain, it was necessary to categorize the data in some meaningful manner. Based on the technique developed by Mobily (1987), the respondents were classified as having minimal, low, moderate, or high role strain scores. The upper and lower limits for each category were created by utilizing the actual mean value (2.59) and the standard deviation (± 0.56) of all respondents' scores obtained from the data analysis and rounding to the nearest tenth. Table 24 presents the possible range of scores, the actual scores, and the frequency distribution for each category. The means of the subscales are presented in Table 25 below.

Table 24.

Degree of Reported Role Strain.

Category	M ± SD	Range	Actual Range	n	%
Minimal	1.70 ± 0.18	0.00 - 2.00	1.35 – 2.00	33	13.2
Low	2.31 ± 0.17	2.01 - 2.60	2.02 – 2.60	93	37.2
Moderate	2.86 ± 0.17	2.61 - 3.20	2.61 – 3.20	90	36.0
High	3.50 ± 0.33	3.21 - 5.00	3.21 – 4.29	34	13.6

Note: Median = 2.60; 1st quartile = 2.21; 3rd quartile = 2.95

Table 25.

Mean Scores of the Role Strain Scale and Subscales.

Subscale	Mean	SD
Total Role Strain	2.59	0.56
Role Overload	3.16	0.76
Inter-Sender Role Conflict	2.81	0.85
Intra-Sender Role Conflict	2.68	0.56
Global Role Conflict	2.59	0.55
Role Ambiguity	2.57	0.88
Role Incongruity	2.46	0.74
Inter-Role Conflict	2.29	0.70
Role Incompetence	2.11	0.62

Of the 55 items on the RSS-ATE, the 10 items with the highest reported means are presented in Table 26. Among these top 10 sources of stress, both role overload and intra-sender role conflict held 4 spots. The other leading contributors to role strain in the top ten were inter-role conflict and inter-sender role conflict. (See Table 26). The complete list of questions rank ordered from highest to least rating are presented in Table 3 in Appendix D.

Table 26.

Leading Components of Role Strain.

Item	Minimum	Maximum	Mean	SD
1. Overload - Coping with number of responsibilities	1.00	5.00	3.52	0.92
2. Intra-sender – Not having adequate time	1.00	5.00	3.45	0.95
3. Inter-role - Demands interfere with personal	1.00	5.00	3.45	0.99
4. Intra-sender - Students who are inadequately prepared/poor motivation	1.00	5.00	3.39	0.88
5. Intra-sender - salary incongruent with performance	1.00	5.00	3.30	1.30
6. Overload - emotionally drained from work	1.00	5.00	3.29	1.02
7. Overload - physically drained from work	1.00	5.00	3.21	1.00
8. Overload - amount of work	1.00	5.00	3.20	0.96
9. Inter Sender - unable to satisfy conflicting demands	1.00	5.00	3.18	1.07
10. Intra Sender - curricular changes	1.00	5.00	3.13	0.95

Relationships between Personal, Employment, and Institutional Characteristics and Academic Role Strain

To assess the relationships between personal, employment, and institutional characteristics and academic role strain and subscale scores, a series of one-way analysis of variance (ANOVA) tests were conducted. The alpha level was set at $p < .05$ a priori for all analyses. Where significant differences were noted between groups, a Tukey's least significant difference (LSD) post hoc test ($p < .05$) was conducted to examine pair wise differences between groups.

Personal Characteristics

To test the first hypothesis concerning years of athletic training education experience, a one-way ANOVA examining years in athletic training education revealed a significant difference in total role strain scores between the age groups. The LSD post hoc test indicated that individuals with 5 to 9 years of experience reported significantly higher total role strain scores than individuals with 0 to 4 years of experience or individuals with 20 years of experience or more. Therefore, the hypothesis that individuals with less than 5 years of education experience would report the highest role strain scores was not supported by the data. (See Tables 27 and 28).

Table 27.

ANOVA Summary for Years of Experience on Total Role Strain.

Source	df	SS	MS	F	p	η^2
Between Groups	4	3.190	0.798	2.57	0.039	0.041
Within Groups	240	74.43	0.310			

Table 28.

Means and Standard Deviations for Effects of Years of Experience in AT Education on Total Role Strain.

Years in AT Education	Mean	SD
0 – 4 years	2.53	0.58_a
5 – 9 years	2.76	$0.51_{a,b}$
10 – 14 years	2.52	0.53
15 – 19 years	2.57	0.69
20 or more years	2.44	0.54_b

Note: Subscripts indicate significant difference between groups, $p < 0.05$

To examine the influence of educational background, a one-way ANOVA examining highest degree earned indicated a significant difference in inter-role conflict scores between individuals having completed the masters and those with the doctorate.

(See Table 29). Individuals having completed the doctorate reported a higher level of inter-role conflict than individuals with a master's degree. No significance was found for total role strain and the other subscale scores. Therefore, the hypothesis that individuals with the master's degree would report higher role strain was not supported by the data.

Table 29.

Means, SD, and ANOVA for Effects of Highest Degree Earned on Academic Role Strain.

	Doctorate		Master's		ANOVA	
Variable	M	SD	M	SD	F	η^2
Total Role Strain	2.60	0.58	2.58	0.55	0.052	< 0.001
Role Ambiguity	2.45	0.77	2.62	0.91	1.678	0.013
Role Overload	3.10	0.79	3.13	0.78	0.1530	0.001
Role Conflict (RC)	2.64	0.57	2.56	0.54	0.609	0.005
Inter-role RC	2.42	0.69	2.22	0.70	3.072 *	0.024
Intra-Sender RC	2.73	0.8	2.73	0.53	0.064	0.001
Inter-Sender RC	2.79	0.87	2.81	0.84	0.464	0.004
Role Incompetence	2.00	0.61	2.17	0.62	2.384	0.019
Role Incongruity	2.56	0.80	2.41	0.72	1.126	0.009

Note: Doctorate, n=87; Master's, n=163; * $p < .05$,

To examine the influence of enrollment in a doctoral program while working full-time on role strain scores, a one-way ANOVA revealed a significant difference between those enrolled in a doctoral program, those with a master's degree only, and those with a doctorate on inter-role conflict scores ($F=4.67$, $df=1/247$, $p = 0.010$, $eta^2 = .036$). Those not currently enrolled in a doctoral program reported lower inter-role conflict scores (2.14 ± 0.68) than both those currently working towards the doctorate (2.38 ± 0.72) and those with a doctorate (2.42 ± 0.69). No differences were noted in inter-role conflict scores between those enrolled and those having completed the doctorate. No significant differences were noted for total role strain and the remaining subscale scores. Therefore, the hypothesis that doctorate enrollment status would increase role strain scores was partially supported by the data for inter-role conflict and not for the remaining variables. (See Table 4 in Appendix D).

Additional one-way ANOVAs were conducted to examine the remaining personal variables. A one-way ANOVA examining gender indicated a significant difference in role incompetence scores between males and females ($F=22.64$, $df=1/249$, $p <.001$, $eta^2 = 0.084$). Females reported a higher level of role incompetence (2.30 ± 0.55) than males (1.94 ± 0.63). A second one-way ANOVA examining gender also indicated a significant difference in role overload between males and females ($F=7.36$ $df=1/249$, $p = 0.007$, $eta^2 = 0.029$). Females reported a higher level of role overload (3.26 ± 0.77) than males (2.99 ± 0.76). (See Table 30).

An additional one-way ANOVA examining parenting status on role strain indicated a significant difference for role overload ($F=5.289$, $df=1/249$, $p = 0.022$, $eta^2 =$

0.021). Respondents without dependents reported higher role overload scores (3.24 ± 0.76) than individuals with dependents (3.01 ± 0.78). With regard to other personal variables, no significant differences were found between individuals categorized according to marital status or route to BOC certification. (See Tables 5 through 7 in Appendix D).

Table 30.

Means, SD, and ANOVA for Effects of Gender on Academic Role Strain.

	Females		Males		ANOVA		
Variable	M	SD	M	SD	F (1,248)	η^2	p
Total Role Strain	2.65	0.53	2.53	0.56	2.786	0.011	0.096
Role Ambiguity	2.62	0.84	2.51	0.92	0.962	0.004	0.328
Role Overload	3.26	0.77	2.99	0.76	7.364	0.029	0.007
Role Conflict (RC)	2.61	0.53	2.56	0.58	0.46	0.002	0.497
Inter-role RC	2.29	0.68	2.28	0.72	0.021	<0.001	0.885
Intra-Sender RC	2.77	0.55	2.69	0.54	1.259	0.005	0.263
Inter-Sender RC	2.89	0.82	2.73	0.87	2.239	0.009	0.136
Role Incompetence	2.30	0.55	1.94	0.63	22.643	0.084	<0.001
Role Incongruity	2.47	0.73	2.45	0.76	0.057	<0.001	0.811

Employment Characteristics

A one-way ANOVA examining tenure/contract status indicated a significant difference in role ambiguity scores between groups (F=3.11, df=4/240, p = .016, eta^2 = 0.049). The LSD post hoc test indicated that individuals with tenure reported role ambiguity scores (M=2.14 ± 0.71) significantly lower than both individuals in tenure track positions (M=2.57 ± 0.83), p = .015, and individuals on continuing/renewable contracts (M=2.69 ± 0.92), p = .001. Therefore, the hypothesis regarding role strain scores and tenure was supported for role ambiguity, but the data failed to support the hypothesis for total role strain and the other subscales. No significant differences were noted between individuals who were employed without a contract or on term-limited contracts. (See Tables 8 and 9 in Appendix D).

To examine the influence of years of employment at the current institution on role strain scores, a one-way ANOVA revealed no significant differences between the 4 groups (0 to 4, 5 to 9, 10 to 15 and 20 or more years). Therefore, this hypothesis was not supported. (See Table 10 in Appendix D).

To examine the influence of clinical practice on role strain scores, a one-way ANOVA revealed a significant difference between individuals classified as having academic/clinical appointments and those without clinical responsibilities (F=6.735, df=1/218, p= 0.01, eta^2 = 0.030). Academic clinicians reported higher inter-role conflict scores (M=2.41 ± 0.72) than individuals without clinical responsibilities (M=2.17 ± 0.67). No significant differences were noted between academic clinicians and non-clinicians with regards to total role strain and the other subscale scores. Therefore, one

portion of the hypothesis (inter-role conflict) was supported, while the remaining portions of the hypothesis were rejected. (See Table 11 in Appendix D).

To examine the influence of academic rank on total role strain scores, a one-way ANOVA revealed a significant difference in role ambiguity scores between ranks ($F=3.865$, $df=5/243$, $p= 0.002$, $eta^2 = 0.074$). (See Table 12 and 13 in Appendix D) . Several between group differences were noted between full professors, associate professors, assistant professors, instructors, and those classified as 'other'. Post hoc tests revealed that full professors reported role ambiguity scores ($M = 2.01 \pm 0.68$) significantly lower than assistant professors ($M= 2.56 \pm 0.78$), $p = .022$, instructors/lecturers ($M= 2.70 \pm 0.98$), $p= 0.004$ and others ($M=3.13 \pm 0.95$), $p < .001$. Associate professors also reported role ambiguity scores ($M=2.31 \pm 0.76$) significantly lower than instructors/lecturers and others, $p = .022$.

To examine the influence of faculty union membership on academic role strain scores, a one-way ANOVA revealed no significant differences were noted between those that were employed through a collective bargaining agreement, those not eligible for union membership, and those without unions on their campuses. (See Table 14 in Appendix D).

To test the hypothesis that the reported number of hours worked per week had a significant positive correlation with academic role strain scores, Pearson's product-moment correlations were calculated. The hypothesis was supported for a weak positive relationship between hours worked and total role strain scores, $r(247) = .185$ ($p = 0.003$); role overload, $r(247) = .354$ ($p<0.001$); inter-role conflict, $r(247) = .188$ ($p = .003$); intra-

sender role conflict, r(247) = .179 (p = 0.005); and global role conflict, r (247) = .191, (p = .002). No relationship was revealed between hours worked per week and role incongruity, inter-sender role conflict, role ambiguity, or role incompetence.

Institutional Characteristics

To examine the influence of Carnegie Classification on academic role strain scores, a one-way ANOVA revealed no significant differences in total role strain or subscale scores between individuals employed a Doctorate Granting institutions, Masters Colleges and Universities, and Baccalaureate Colleges. (See Table 15 in Appendix D). Therefore, the hypothesis was not supported by the data.

To examine the influence of public/private affiliation, a one-way ANOVA revealed a significant difference in role incompetence scores between individuals employed at publicly supported institutions and those employed at private colleges and universities (F=5.608, df=1/244, p= 0.019, $eta^2 = 0.022$). Individuals employed at private colleges and universities reported higher role incompetence scores (M=2.21 ± 0.61) than individuals employed at publicly supported institutions (M=2.03 ± 0.62). (See Table 16 in Appendix D) . Therefore, one portion of the hypothesis (role incompetence) was accepted and the others rejected.

To examine the influence of athletics affiliation on academic role strain scores, a one-way ANOVA revealed no significant differences in total role strain or subscale scores between individuals employed at institutions competing at the NCAA Division I,

II, III and NAIA levels. (See Table 17 in Appendix D). Therefore, the data failed to support the hypothesis.

To examine the influence of program stability (length of time accredited) on academic role strain scores, a one-way ANOVA revealed no significant differences in total role strain or subscale scores between individuals employed at programs accredited for less than 5 years, more than 5 but less than 10 years, and those programs accredited more than 10 years. (See Table 18 in Appendix D). Therefore, the data failed to support the hypothesis.

To examine the influence of the school in which the program is housed on academic role strain scores, a one-way ANOVA revealed a significant difference in role incompetence ($F=2.544$, $df=6/243$, $p= 0.021$, $eta^2 = 0.050$). Post hoc tests revealed that individuals that reported that their institutions did not delineate departments by schools (Not Applicable) had role incompetence scores ($M=2.32 \pm 0.58$) significantly higher than individuals employed in schools of allied health/medicine ($M=1.90 \pm 0.49$), $p = 0.002$, schools of education ($M=2.06 \pm 0.54$), $p = 0.025$, and schools classified as hybrids ($M=1.89 \pm 0.68$), $p = 0.002$. (See Tables 19 and 20 in Appendix D).

A one-way ANOVA revealed a significant difference in total role strain, role overload, intra-sender role conflict, inter-sender role conflict, role incompetence, and global role conflict between departments in which the AT program is housed. (See Table 31). Post hoc tests revealed that individuals employed in departments of Natural Sciences (NS) reported total role strain scores significantly lower than individuals in departments of Kinesiology (KIN), $p = 0.001$, departments of Health Science (HS), $p =$

0.002, departments of Education (ED), $p < .001$, and departments of Athletic Training (AT), $p = 0.021$. Total role strain scores of individuals employed in AT were also significantly lower than individuals employed in ED, $p = 0.05$. (See Table 21 in Appendix D).

Post hoc tests also revealed that individuals employed in NS reported significantly lower subscale scores than individuals in other departments. NS faculty reported role overload scores significantly lower than individuals in KIN ($p = 0.004$), HS ($p = 0.003$), ED ($p < .001$), and AT ($p = 0.021$). Role overload scores of individuals employed in ED were also significantly higher than individuals employed in KIN ($p = 0.033$) and in AT ($p = 0.006$).

Intra-sender role conflict scores were also significantly lower for individuals employed in departments of NS than KIN ($p = 0.016$), HS ($p = 0.027$), and ED ($p= 0.001$). Individuals employed in ED reported intra-sender role conflict scores that were significantly higher than KIN ($p = 0.042$) and AT ($p = 0.008$).

In addition to total role strain and intra-sender role conflict, faculty members in NS report significantly lower subscale scores than other departments. Individuals in NS reported significantly lower inter-role conflict scores than KIN ($p= 0.041$) and HS ($p = 0.047$), lower intra-sender role conflict scores than KIN ($p= 0.016$), HS ($p= 0.027$), and ED ($p = 0.001$), lower role incongruity scores than KIN ($p = 0.010$), HS ($p = .004$), ED ($p = 0.012$), and AT ($p = 0.037$), lower inter-sender role conflict scores than KIN ($p = 0.003$), HS ($p = 0.004$), ED ($p = 0.005$), and AT ($p = .027$), lower role ambiguity scores than ED ($p = 0.015$), lower role incompetence scores than KIN ($p = 0.001$), HS ($p =$

0.024), ED (p = 0.002), and AT (p = 0.016), and lower global role conflict scores than KIN (p = .004), HS (p = 0.006), ED (p = 0.002), and AT (p = 0.040).

In other comparisons, ED reported higher intra-sender role conflict scores than KIN (p= 0.042) and AT (p = 0.008). The results of these pair wise comparisons, however, should be examined carefully due to the small number of AT faculty members employed in NS departments (n=7) compared to the other departments. (See Tables 22 through 26 in Appendix D).

Table 31.

ANOVA Summary for Department Affiliation on Academic Role Strain and Subscale Scores.

Variable Source	SS	MS	F (4, 241)	p	η^2
Total Role Strain					
Between Groups	4.555	1.139	3.71	0.006	0.058
Within Groups	73.564	0.305			
Role Overload					
Between Groups	9.967	2.492	4.305	0.002	0.067
Within Groups	139.502	0.579			
Role Conflict					
Between Groups	3.373	0.843	2.823	0.026	0.045
Within Groups	71.989	0.299			
Intra-Sender RC					
Between Groups	3.864	0.966	3.339	0.011	0.053
Within Groups	69.72	0.289			
Inter-Sender RC					
Between Groups	7.576	1.894	2.675	0.033	0.043
Within Groups	170.613	0.708			
Role Incompetence					
Between Groups	5.442	0.1.360	3.717	0.006	0.050
Within Groups	88.216	0.366			

Relationship between Academic Role Orientation and Academic Role Strain

To test the hypothesis that ideal role orientation significantly influences academic role strain and subscale scores, a one-way ANOVA was calculated between groups of respondents. No significant differences were noted for total role strain scores, role ambiguity, role overload, role incompetence, intra-sender role conflict, and inter-sender role conflict based on ideal role orientation. (See Table 27 in Appendix D). A one-way ANOVA revealed a significant difference in inter-role conflict, global role conflict, and role incongruity scores among individuals grouped according to ideal role orientation. (See Table 32).

Due to the single respondent reporting a Type VI (tRS) ideal orientation, this individual's responses were eliminated from post hoc analyzes. Post hoc tests revealed that individuals reporting a type II ideal orientation (tRs), where research is valued and emphasized, reported significantly higher inter-role conflict scores than individuals reporting type I (Trs) and Type III (trS) ideal orientations. It was also revealed that inter-role conflict scores for individuals reporting a Type VII (TRS) ideal orientation were significantly higher than individuals reporting Type I (Trs), Type III (trS), Type IV (TRs), and Type V (TrS) orientation.

Table 32.

ANOVA Summary for Ideal Role Orientation on Inter-role Conflict, Role Conflict, and Role Incongruity.

Variable Source	SS	MS	F (5, 237)	p	η^2
Inter-role Conflict					
Between Groups	6.893	1.38	3.120	0.010	0.074
Within Groups	104.70	0.42			
Role Conflict					
Between Groups	3.318	0.66	2.336	0.043	0.061
Within Groups	67.33	0.28			
Role Incongruity					
Between Groups	7.570	1.26	2.329	0.033	0.054
Within Groups	128.38	0.54			

Post hoc tests of global role conflict also indicated that individuals with a Type II orientation (tRs) reported significantly higher global role conflict scores than individuals reporting type I (Trs)and Type III (trS) ideal orientations. The post hoc tests also indicated that global role conflict scores for individuals reporting a Type VII (TRS) ideal

orientation were significantly higher than individuals reporting Type I (Trs) and Type III orientations.

Post hoc tests of role incongruity indicated that individuals with a Type II (tRs) reported significantly higher role incongruity than individuals reporting type I (Trs) and type III (trS) role orientations. Individuals reporting type VII (TRS) also reported higher role strain scores than individuals reporting type III (trS) role orientations. (See Table 33).

Table 33.

Mean and Standard Deviations for Inter-Role Conflict, Role Conflict, and Role Incongruity by Ideal Role Orientation.

Ideal Role Orientation		Inter-role Conflict		Role Conflict		Role Incongruity	
	n	Mean	SD	Mean	SD	Mean	SD
Trs	70	$2.11_{a,b}$	0.64	$2.51_{g,h}$	0.51	2.41_{k}	0.64
tRs	3	$2.93_{a,c}$	0.13	$3.19_{g,i}$	0.30	$3.30_{k.l}$	0.43
trS	12	$2.07_{c,d}$	1.04	$2.35_{i,j}$	0.83	$2.07_{l,m}$	0.21
TRs	27	2.29_{e}	0.55	2.59	0.49	2.47	0.14
TrS	112	2.29_{f}	0.65	2.58	0.49	2.47	0.07
tRS	1	3.50	----	3.61	----	3.90	----
TRS	19	$2.69_{b,d,e,f}$	0.76	$2.83_{h,j}$	0.70	2.73_{m}	0.17
trs	0						

Note: Means marked with the same letter indicate significant difference between groups, Tukey's LSD post hoc test, $p < .05$.

Actual Role Orientation

To test the hypothesis that an individual's actual role orientation significantly influences academic role strain and subscale scores, a one-way ANOVA was calculated between groups of respondents. No significant difference was noted in intra-sender role strain scores or role incompetence subscale scores between groups. The ANOVA tests revealed a significant difference in total role strain scores and the remaining subscale scores. (See Table 34).

Post hoc tests revealed a significant difference for total role strain scores between groups. Individuals reporting their actual role orientations and responsibilities as Type I (Trs) had significantly lower total role strain scores than individuals with type III (trS), where service is emphasized, type IV (TRs), where both teaching and research are emphasized, and with type VII (TRS) where teaching, research, and service are all given equal importance and emphasized. Similarly, individuals with type III actual role orientations (trS) reported significantly lower total role strain scales than individuals with a Type V (TrS) actual orientation, where both teaching and service are emphasized. Individuals that reported that their actual role orientation was Type VII (TRS) had higher total role strain scores than individuals with Type V (TrS) role orientations. (See Table 35).

Table 34.

ANOVA Summary for Actual Role Orientation on Academic Role Strain and Subscale Scores.

Variable Source	SS	MS	F (7, 239)	p
Total Role Strain				
Between Groups	6.814	0.973	3.261	<0.001
Within Groups	71.350	0.299		
Role Overload				
Between Groups	11.435	1.634	2.819	0.008
Within Groups	138.520	0.580		
Role Conflict (RC)				
Between Groups	8.512	1.216	4.352	<0.001
Within Groups	66.77	0.279		
Inter-sender RC				
Between Groups	13.233	1.890	2.738	0.009
Within Groups	165.037	0.691		
Inter-Role Conflict				
Between Groups	15.802	2.257	5.145	<0.001
Within Groups	104.877	0.439		
Role Ambiguity				
Between Groups	13.104	1.872	2.495	0.017
Within Groups	179.298	0.750		
Role Incongruity				
Between Groups	13.408	1.915	3.688	0.001
Within Groups	124.138	0.519		

Table 35.

Mean and Standard Deviations of Academic Role Strain by Actual Role Orientation.

Actual Role Orientation		Total Role Strain	
	N	Mean	SD
Trs	70	$2.46_{a,b,c}$	0.54
tRs	4	2.48	0.85
trS	20	$2.88_{a,d}$	0.62
TRs	10	2.89_{b}	0.57
TrS	126	$2.54_{d,e}$	0.51
tRS	3	3.02	0.87
TRS	11	$3.04_{c,e}$	0.74
trs	3	2.68	0.10

Note: Means marked with the same letter indicate significant difference between groups, Tukey's LSD post hoc test, $p < .05$.

Similar results to the total role strain scores were noted between role orientation groups on the subscale scores. Individuals with Type III (trS) actual role orientations had significantly higher inter-role conflict scores, higher global role conflict scores, higher role incongruity scores, higher role overload scores, higher inter-sender role conflict scores, and higher role ambiguity scores than at least one group on each subscale. The other two orientations reporting significantly higher subscale scores were type V (TRs), VI (tRS), and type VII (TRS). For the role ambiguity subscale, individuals reporting a

type VI (tRS) actual role orientation had significantly higher role ambiguity scores than individuals with type I (Trs), type II (tRs), and type V (TrS). (See Table 36). Based on the results of the ANOVAs and the post-hoc test results, the hypothesis that individuals with type I (Trs) academic role orientations, where teaching is emphasized, would have higher academic role strain scores was not supported.

Table 36.

Mean and Standard Deviations of Role Ambiguity by Actual Role Orientation.

Actual Role Orientation	Role Ambiguity		
	n	Mean	SD
Trs	70	$2.37_{a,b,c}$	0.76
tRs	4	2.12_{d}	0.72
trS	20	2.88_{a}	0.91
TRs	10	3.09_{b}	0.95
TrS	126	2.55_{e}	0.88
tRS	3	$3.67_{c,d,e}$	1.29
TRS	11	2.61	1.13
trs	3	3.24	0.54

Note: Means marked with the same letter indicate significant difference between groups, Tukey's LSD post hoc test, $p < .05$.

Role Orientation Congruency

To test the second role orientation hypothesis that role orientation congruency would significantly influence the total role strain and subscale scores, a series of ANOVAs were calculated to determine the effects of personal (ideal-actual) congruency, ideal-institutional congruency, ideal-colleague congruency, ideal-supervisor congruency, ideal-profession congruency, and ideal-role model congruency. A second series of ANOVAs were calculated to determine the effects of actual-institutional congruency, actual-colleague congruency, actual-supervisor congruency, actual-profession congruency, and actual-role model congruency.

Personal Congruency

The ANOVA examining personal congruency supported the hypothesis that individuals with ideal role orientations incongruent with their actual role orientations would have significantly higher scores on total role strain, role overload, inter-role conflict, intra-sender role conflict, role incongruity, inter-sender role conflict, and global role conflict. The hypothesis was not supported in terms of role incompetence and role ambiguity. (See Table 37).

Table 37.

Means, SD, and ANOVA for Effects of Personal Congruency on Academic Role Strain.

	Congruent		Incongruent		ANOVA		
Variable	M	±SD	M	±SD	F (1,248)	η^2	p
Total Role Strain	2.46	0.49	2.69	0.59	11.121	0.043	0.001
Role Ambiguity	2.46	0.83	2.65	0.90	3.076	0.012	0.081
Role Overload	2.97	0.70	3.24	0.81	7.486	0.029	0.007
Role Conflict (RC)	2.44	0.47	2.70	0.58	14.329	0.055	< 0.001
Inter-role RC	2.09	0.59	2.44	0.74	15.966	0.060	< 0.001
Intra-Sender RC	2.61	0.59	2.82	0.56	9.908	0.038	0.002
Inter-Sender RC	2.68	0.79	2.90	0.88	4.321	0.017	0.03
Role Incompetence	2.13	0.62	2.10	0.62	0.221	0.001	0.639
Role Incongruity	2.28	0.66	2.60	0.78	12.329	0.047	< 0.001

Note: Congruent, n=107, Incongruent, n= 143

Institutional Congruency

The results of the ANOVAs supported the hypothesis that ideal-institutional role orientation incongruency significantly impacts role incongruity (F= 4.36, df=1, 248, p= 0.038, $eta^2 = 0.017$) and role ambiguity (F= 4.78, df=1,248, p= 0.030, $eta^2 = 0.019$). Individuals with ideal-institutional incongruity reported higher role incongruity subscale scores (M = 2.36 ± 0.71) than individuals with ideal role orientations similar to the perceived role orientation appropriate with the mission and values of their institution (M

= 2.55 ± 0.76). Individuals with ideal-institutional incongruity also reported higher role ambiguity scores (M = 2.68 ± 0.92) than those with congruity (M = 2.42 ± 0.82). The impact of actual-institutional role orientation incongruity was more pronounced as it significantly impacted total role strain scores as well as 7 out of 8 subscale scores. (See Table 38).

Table 38.

Means, SD, and ANOVA for Effects of Actual – Institutional Congruency on Academic Role Strain.

	Congruent		Incongruent		ANOVA		
Variable	M	SD	M	SD	F (1,248)	η^2	p
Total Role Strain	2.45	0.51	2.77	0.58	14.56	0.055	< 0.001
Role Ambiguity	2.38	0.80	2.73	0.91	10.3	0.040	0.002
Role Overload	3.00	0.78	3.23	0.76	5.67	0.022	0.018
Role Conflict (RC)	2.45	0.52	2.70	0.56	13.09	0.050	< 0.001
Inter-role RC	2.12	0.66	2.42	0.70	13.40	0.051	< 0.001
Intra-Sender RC	2.64	0.52	2.80	0.55	5.98	0.024	0.015
Inter-Sender RC	2.65	0.82	2.95	0.85	8.47	0.033	0.004
Role Incompetence	2.12	0.60	2.10	0.64	0.07	0.000	0.793
Role Incongruity	2.23	0.59	2.66	0.81	23.17	0.085	< 0.001

Note: Congruent, n=115, Incongruent, n= 135.

Supervisor Congruency

With the exception of role incompetence subscale scores, the one-way ANOVAs examining ideal - supervisor congruency indicated that the incongruent group reported significantly higher total role strain and subscale scores than the congruent group. (See Table 39).

Table 39.

Means, SD, and ANOVA for Effects of Ideal – Supervisor Congruency on Academic Role Strain.

	Congruent		Incongruent		ANOVA		
Variable	M	SD	M	SD	F (1,248)	η^2	p
Total Role Strain	2.44	0.50	2.71	0.58	15.19	0.058	< 0.001
Role Ambiguity	2.43	0.80	2.68	0.93	4.94	0.020	0.027
Role Overload	2.93	0.74	3.28	0.77	12.81	0.049	< 0.001
Role Conflict (RC)	2.44	0.48	2.71	0.58	15.51	0.059	< 0.001
Inter-role RC	2.10	0.63	2.44	0.72	15.05	0.057	< 0.001
Intra-Sender RC	2.62	0.49	2.81	0.57	8.01	0.031	0.005
Inter-Sender RC	2.63	0.78	2.95	0.88	8.73	0.034	0.003
Role Incompetence	2.09	0.62	2.13	0.62	0.249	0.001	0.618
Role Incongruity	2.26	0.63	2.63	0.79	16.235	0.061	< 0.001

Note: Congruent, n = 112; Incongruent, n = 138

The one-way ANOVAs examining actual – supervisor congruency indicated that the incongruent group also reported significantly higher total role strain and subscale scores than the congruent group on all role strain scales except role incompetence. (See Table 40).

Table 40.

Means, SD, and ANOVA for Effects of Actual – Supervisor Congruency on Academic Role Strain.

	Congruent		Incongruent		ANOVA		
Variable	M	SD	M	SD	F (1,248)	η^2	p
Total Role Strain	2.44	0.52	2.77	0.56	22.06	0.082	< 0.001
Role Ambiguity	2.38	0.81	2.79	0.92	13.98	0.053	< 0.001
Role Overload	2.95	0.77	3.33	0.74	15.19	0.058	< 0.001
Role Conflict (RC)	2.45	0.52	2.76	0.54	21.21	0.079	< 0.001
Inter-role RC	2.14	0.69	2.47	0.67	15.16	0.058	< 0.001
Intra-Sender RC	2.62	0.51	2.86	0.55	12.87	0.049	< 0.001
Inter-Sender RC	2.62	0.79	3.04	0.86	16.23	0.061	< 0.001
Role Incompetence	2.08	0.52	2.76	0.54	0.93	0.004	0.335
Role Incongruity	2.29	0.64	2.68	0.81	17.88	0.067	< 0.001

Note: Congruent, n = 138; Incongruent, n = 112

Colleague Congruency

With the exception of role incompetence subscale scores, the one-way ANOVAs examining ideal - colleague role orientation congruency indicated that the incongruent group reported significantly higher total role strain and subscale scores than the congruent group. (See Table 41).

Table 41.

Means, SD, and ANOVA for Effects of Ideal – Colleagues Congruency on Academic Role Strain.

	Congruent		Incongruent		ANOVA		
Variable	M	SD	M	SD	F (1,248)	η^2	p
Total Role Strain	2.40	0.55	2.68	0.54	13.96	0.053	< 0.001
Role Ambiguity	2.32	0.84	2.68	0.87	9.44	0.037	0.002
Role Overload	2.87	0.75	3.24	0.76	12.67	0.049	< 0.001
Role Conflict (RC)	2.41	0.51	2.66	0.55	12.05	0.046	0.001
Inter-role RC	2.06	0.64	2.39	0.70	12.14	0.047	0.001
Intra-Sender RC	2.62	0.55	2.78	0.53	4.48	0.018	0.035
Inter-Sender RC	2.57	0.82	2.91	0.84	8.93	0.035	0.003
Role Incompetence	2.05	0.72	2.14	0.57	1.301	0.005	0.255
Role Incongruity	2.24	0.72	2.56	0.74	10.38	0.040	0.001

Note: Congruent, n = 77; Incongruent, n = 173

Similarly, the one-way ANOVAs examining actual - colleague role orientation congruency indicated that the incongruent group reported significantly higher total role strain scores as well as inter-role conflict, role conflict, role incongruity, and inter-sender role conflict subscale scores than the congruent group. (See Table 42).

Table 42.

Means, SD, and ANOVA for Effects of Actual – Colleagues Congruency on Academic Role Strain.

	Congruent		Incongruent		ANOVA		
Variable	M	SD	M	SD	F (1,248)	η^2	p
Total Role Strain	2.49	0.54	2.66	0.56	5.58	0.022	0.019
Role Ambiguity	2.47	0.88	2.64	0.88	2.19	0.009	0.141
Role Overload	3.03	0.79	3.19	0.76	2.69	0.011	0.103
Role Conflict (RC)	2.49	0.52	2.66	0.56	5.91	0.023	0.016
Inter-role RC	2.17	0.63	2.37	0.73	4.86	0.019	0.028
Intra-Sender RC	2.67	0.54	2.77	0.54	1.82	0.007	0.179
Inter-Sender RC	2.62	0.88	2.94	0.84	8.77	0.034	0.003
Role Incompetence	2.12	0.60	2.10	0.64	0.07	0.004	0.793
Role Incongruity	2.34	0.68	2.55	0.78	5.30	0.021	0.022

Note: Congruent, n = 104; Incongruent, n = 146

Professional Congruency

To examine the influence of the congruency between an individual's ideal academic role orientation and the perceived role orientation that best meets the needs of the profession, a one-way ANOVA revealed no significant differences between total role strain and subscale scores. (See Table 28 in Appendix D). When professional congruency was measured against an individual's actual academic role orientation, a one-way ANOVA revealed a significant difference in total role strain scores as well as in role overload and inter-sender role conflict subscale scores. Individuals with actual academic role orientations that were incongruent with the perceived needs of athletic training and athletic training education reported higher total role strain, inter-sender role strain, role overload scores than individuals who perceived their actual role orientation to be congruent with the needs of the profession. (See Table 43).

Table 43.

Means, SD, and ANOVA for Effects of Actual – Profession Congruency on Academic Role Strain.

	Congruent		Incongruent		ANOVA		
Variable	M	SD	M	SD	F (1,248)	η^2	p
Total Role Strain	2.49	0.58	2.64	0.55	4.29	0.017	0.039
Role Ambiguity	2.42	0.92	2.64	0.85	3.40	0.014	0.066
Role Overload	2.98	0.77	3.19	0.77	4.23	0.017	0.041
Role Conflict (RC)	2.49	0.56	2.63	0.54	3.59	0.014	0.059
Inter-role RC	2.21	0.69	2.33	0.70	1.53	0.006	0.218
Intra-Sender RC	2.64	0.59	2.77	0.52	3.16	0.013	0.077
Inter-Sender RC	2.66	0.86	2.88	0.84	4.02	0.016	0.046
Role Incompetence	2.04	0.61	2.15	0.62	1.62	0.006	0.205
Role Incongruity	2.38	0.78	2.50	0.72	1.55	0.006	0.215

Note: Congruent, n = 84; Incongruent, n = 166

Role Model Congruency

To examine the influence of the congruency between an individual's ideal academic role orientation and the perceived role orientation of one's role models, a one-way ANOVA revealed no significant difference between congruent and incongruent groups on the total role strain scale and subscale scores. (See Table 29 in Appendix D).

When role model congruency was measured against an individual's actual academic role orientation, a one-way ANOVA revealed a significant difference for the inter-role conflict subscale. Individuals with role orientations incongruent with the role orientation of their role models reported significantly higher inter-role conflict scores than those with congruent academic role orientations to their mentors. (See Table 44). No other significant differences for total role strain and subscale scores were reported.

Table 44.

Means, SD, and ANOVA for Effects of Actual – Role Model Congruency on Inter-Role Conflict.

	Congruent		Incongruent		ANOVA		
Variable	M	SD	M	SD	F (1,248)	η^2	p
Inter-role Conflict	2.15	0.68	2.36	0.70	5.188	0.020	0.024

Note: Congruent, n=90; Incongruent, n=160

Relationship between

Academic Role Strain and Intent to Leave

A one-way ANOVA was conducted to examine the potential relationships between academic role strain on an individual's intent to leave their institution, to leave athletic training clinical practice, to leave athletic training education, to leave the profession of athletic training, and to leave academe to pursue other outside interests. Significant differences were reported between groups categorized as having minimal, low, moderate, and high academic role strain for all of the items examining intent to leave except desire to leave athletic training education and return/remain in clinical practice. ($F= 2.301$, $df=3, 183$, $p= 0.079$, $eta^2 = 0.038$). (See Table 45). Individuals reporting minimal role strain reported the lowest intent to leave scores across all questions compared to individuals reporting low, moderate, and high role strain. Individuals with high role strain reported significantly higher desire to leave their current institution than individuals classified as minimal or low role strain. (See Table 46).

Table 45.

ANOVA Summary for Total Role Strain and Intent to Leave.

Variable Source	SS	MS	F (3, 186)	p	η^2
Current Institution					
Between Groups	33.24	11.08	9.155	<0.001	0.141
Within Groups	221.45	1.21			
Leave AT Ed/ Remain in Clinical Practice					
Between Groups	7.71	2.57	2.30	0.079	0.038
Within Groups	204.46	1.12			
Leave AT Clinical Practice/Remain in AT Ed					
Between Groups	68.87	22.96	9.13	<0.001	0.092
Within Groups	460.40	2.52			
Leave AT Ed/Remain in Higher Ed.					
Between Groups	15.16	5.05	3.76	0.012	0.084
Within Groups	245.94	1.34			
Leave Higher Ed					
Between Groups	15.65	5.22	6.10	0.001	0.180
Within Groups	156.52	0.86			

Table 46.

Means and Standard Deviations for Effects of Total Role Strain on Intent to Leave.

	Minimal		Low		Moderate		High	
Variable	M	SD	M	SD	M	SD	M	SD
Current Institution	$1.57_{a,b,c}$	0.88	$2.46_{a,d}$	1.09	2.72_{b}	1.06	$3.06_{c,d}$	1.55
Leave AT Ed/ Remain Clinical	1.75	1.08	2.06	1.15	2.34	0.95	2.11	1.02
Leave AT Clinical/ Remain AT Ed	$1.25_{a,b,c}$	0.52	3.04_{a}	1.85	2.67_{b}	1.56	3.06_{c}	1.63
Leave AT Ed/ Remain in Higher Ed	$1.61_{a,b}$	1.17	2.04	1.20	2.36_{a}	1.10	2.56_{b}	1.20
Leave Higher Ed	$1.29_{a,b}$	0.76	$1.59_{c,d}$	0.88	$2.01_{a,c}$	0.92	$2.17_{b,d}$	1.29

Note: Groups with same subscripts across rows indicates significant difference, $p<.05$

Summary

The results of the study indicate that athletic training educators experience low to moderate degree of role strain and certain personal, employment, and departmental variables significantly influence role strain scores. Additionally, academic role orientation and role orientation incongruency has a significant relationship with role strain scores. Finally, the majority of athletic training educators report a low frequency of intending to leave the profession. Those with high role strain scores, however, report a

greater intent to leave their institutions, greater intent to leave clinical practice, and greater intent to leave higher education.

The personal, educational, employment and institutional characteristics of the sample were presented. Role overload and inter-sender role conflict were the leading components of role strain reported. Significant relationships were found between years of experience and total role strain as well as gender and role incompetence and role overload. Individuals possessing the doctorate reported higher total role strain and all subscale scores. Tenured faculty reported lower role ambiguity scores when compared to non-tenure track faculty. Similarly, professors and associate professors reported lower role ambiguity scores than faculty members with junior ranks. Individuals with non-traditional ranks reported greater role ambiguity than all other ranks. Individuals with clinical appointments reported greater inter role conflict than individuals without clinical responsibilities. Significant positive correlations were found between number of hours worked and total role strain, role overload, inter-role conflict, intra-sender conflict, and global role conflict. Individuals employed at private colleges and universities reported higher role incompetence scores than those employed at public-sponsored institutions.

When comparing academic role orientation to academic role strain, significant differences were between actual role orientations as well as role orientation congruency. Individuals with actual role orientations where teaching is emphasized reported significantly lower role strain and subscale scores than individuals with role orientations that require a dual emphasis on teaching and research, those that indicated service as their primary responsibility, and those who perceive their positions require that all three

(teaching, research, and service) having equal importance. Individuals with actual role orientations that are incongruent with their ideal orientations reported greater total role strain scores. This finding also occurred with institutional incongruency, supervisor incongruency, and colleague incongruency. Individuals that perceive that their ideal role orientation and actual role orientation differ from the role orientation most appropriate for the mission and values of their institution, the role orientation promoted/encouraged by a supervisor, and the role orientation that represents the norms and values of their colleagues report greater total role strain and subscale scores.

Finally, faculty with high total role strain scores report considering the possibility of leaving their institution, the profession, and higher education more frequently than those with low or minimal role strain scores.

CHAPTER V

DISCUSSION

Based on the findings of the literature review among allied health faculty, the historical development of athletic training education, and previous research examining the work lives of athletic training faculty, it was expected that participants in this study would report low to moderate degrees of role strain. No published research was found examining academic role strain among full-time faculty employed within AT entry-level programs. The decision to study athletic training faculty members was made for several reasons. First, the number of athletic training educational programs has grown by 400 % in the past 10 years. This growth has required a substantially larger pool of faculty members to administer, instruct, and prepare the next generation of athletic trainers. In order to have adequately prepared students, it is essential that faculty members be prepared to meet their academic roles. If faculty are experiencing role strain, there is the potential for declines in teaching effectiveness. Second, previous research on work responsibilities of athletic training faculty has focused almost exclusively on the program directors while little has been written about other faculty providing instructional, administrative, research, and clinical education duties. Third, research in nursing education in the 1980's and 1990's indicated that balancing the demands of teaching, research, and service in addition to clinical education can lead to substantial role strain (O'Shea, 1982; Steele, 1991; Mobily, 1991; Piscopo, 1994). This period coincided with a period of growth and change in nursing education similar to the one currently underway

in athletic training. Finally, in order to prevent role strain from adversely effecting athletic training faculty, it is necessary to first determine the extent of the issue and second to develop strategies to educate faculty, graduate students pursuing faculty positions, and administrators on ways to minimize its effects.

This chapter is structured to first describe the characteristics of athletic training educators in the United States in comparison to previously published reports of AT faculty and collegiate staff. The second half of the chapter describes the leading components of role strain, the factors affecting role strain, and the relationship between academic roles strain, role orientation, and intent to leave. The chapter concludes with a discussion of the limitations of the study and directions for future research.

Characteristics of AT Educators

This study surveyed full-time AT educators affiliated with CAAHEP accredited institutions in the United States during an 8 week period in the Spring of 2006. In July of 2006, the Commission on Accreditation of Athletic Training Education (CAATE) was established and assumed the responsibilities of reviewing and accrediting entry-level programs. Therefore, any discussion concerning accreditation will specifically referred to the current accrediting agency, CAATE. Previous research examining the work lives of AT faculty has focused primarily on the responsibilities and demographics of program directors. Additional research has reported on the demographics of doctoral trained ATCs. This study sought responses from full-time athletic training faculty with or without clinical responsibilities. Though, the response rate for this study was lower than

desired (22.57 %), the sample size provided sufficient numbers to conduct the statistical analyses. Response rates of electronic surveys have been reported to be considerably lower than traditional paper and pencil surveys, phone interviews, or in-person interviews (Van Selm & Jankowski, 2006). Additionally, the characteristics of the respondents mirror the national distribution of athletic training educators and those reported by previous authors.

As growth and development has occurred in athletic training education over the past 20 years, the demographics of the faculty at these programs has changed accordingly. AT faculty are more evenly distributed among men and women, are increasingly trained at the doctorate level, and are focusing more exclusively on academic roles versus dual responsibilities as academic clinicians. It should also be pointed out that AT faculty are in general relatively young with less than 15 years of certified work experience. The discussion which follows describes the results of this study in comparison to previous reports describing the demographic characteristics of athletic training educators.

Personal Characteristics

Gender

The athletic training faculty participating in this study were evenly distributed by gender, males (51.2 %) and females (48.8 %). This corresponds to the relatively even distribution of all certified NATA members nationally, 52 % male, 48 % female (NATA membership statistics, 2005). Among doctorate trained AT faculty in this study, the

distribution was slightly wider with 58 % male and 42 % female. This is an improvement over the gender distribution of doctorally trained AT faculty reported by Hertel, West, Buckley and Denegar (2001), 74.1 % male and 30 % female. Among program directors (PDs), the distribution was similar to those found by Perkins and Judd (2001). In their study, 39 % of the program directors were female. In this study, 46 % of the PDs were female.

Age & Experience

Athletic training faculty members are a relatively young cohort of professionals. In this study, the respondents ranged in age from 23 to 64 years with a median age of 35 years. This matches the distribution reported by Staurowsky and Scriber (1998) in their examination of the work lives of ATCs at accredited programs (25 to 60 years, mean=35). The PDs in this study ranged in age from 27 to 63 with a median age of 39 years. This is slightly lower than median age reported for PDs (42 years) by Perkins and Judd (2001). Not surprisingly, the median age of respondents without program director responsibilities was even lower at 33 years. Both the CAAHEP and CAATE accreditation standards and guidelines require that PDs have at least 5 years of certified experience, and therefore the age of PDs is expected to be higher (CAAHEP, 2001; CAATE, 2005).

The average number of years of certification experience among all respondents was 14.02 ± 8.2 years. For PDs, the average years of certification experience was slightly higher at 16.86 ± 8.0 years. This is slightly lower than the 18.5 years of certification

experience reported by Perkins and Judd (2001), but higher than the 13.6 years reported by Perrin and Lephart (1988) and 12.5 years reported by Staurowsky and Scriber (1998).

It is disconcerting however, that 23 % of the PDs and 48.1 % of the non-PDs had less than 5 years of experience in athletic training education. This can potentially be attributed to the rapid growth in the number of AT faculty positions over the past 5 years (Fuller & Walker, 2004). As programs have chosen to pursue accreditation, the need for qualified faculty has increased. With the proliferation of programs that occurred between 1997 and 2004, it was not surprising that 51.6 % of all respondents indicated working at their current institution for less than 5 years. The number of new program directors and faculty members has been questioned as an area of concern for the future preparation of athletic trainers (Ingersoll, et al., 2005).

There is also a lack of definitive research examining the characteristics of AT faculty with 20 or more years of experience. In a qualitative study examining the development of expert male ATCs, Malasarn, Bloom, Crumpton (2002) reported that three themes emerged explaining these individuals' commitment to the athletic training profession: meaningful experiences, personal attributes and mentoring. Similar studies should be conducted with the small number of AT faculty with 20 or more years of experience to determine the common characteristics of these individuals and to document their understanding of the characteristics necessary to be a successful AT educator. The impact of years of experience in athletic training education and age on academic role strain will be discussed later in this chapter.

Level of Education

It would appear that the overall educational background of AT faculty has not changed considerably over the past 20 years. The majority of AT faculty in this study reported the master's degree as their highest level of education. Thirty five percent (n=88) indicated the doctorate as their highest level of education and were evenly divided between the PhD and the EdD. On a positive note, the number of individuals with the doctorate has risen. In 1997, the NATA Education Task Force recommended the development of programs dedicated to the training of doctoral-educated ATCs (NATA, 1997). In 1998, Staurowsky and Scriber reported that 30% of all respondents had earned the doctorate degree. Among PDs in this study, the number of doctoral trained faculty exceeded 50 % and is a significant increase when compared to the 29 % reported by Perrin and Lephart (1988). However, this represents only a slight improvement over the 43 % of PDs reported by Perkins and Judd (2001). Unfortunately, the number of program directors (n=96) responding to this study represents less than one-third of the possible 322 program directors nationally. Therefore, this 10 % increase should be interpreted with caution.

While the data indicate that the number of doctorally trained PDs is increasing, programs have continued to hire non-doctorally trained clinicians as faculty members to provide didactic as well as clinical instruction. Not having the terminal degree can be a significant professional hurdle when seeking promotion, tenure, and in some cases legitimacy and recognition at colleges and universities. With few exceptions, the doctorate is viewed as the terminal degree. Within health and exercise science, it is

expected that faculty have completed the doctorate, have the expertise to conduct scholarly work, and to teach within their specialty area. As athletic training education programs have proliferated, however, few individuals with the appropriate terminal degree are available to take on the role of program director or full-time faculty member. The impact of academic preparation on academic role strain will be discussed later in this chapter.

Employment Characteristics

Rank and Tenure Status

This study supports previous reports indicating that the majority of athletic training faculty are primarily employed at the junior, non-tenured faculty ranks (instructor or assistant professor), with few faculty reaching the rank of full professor or being granted tenure (Perrin & Lephart, 1988; Perkins & Judd, 2001; Brown, 2001) . In this study, 70 % of the respondents were at the Instructor or Assistant Professor rank. This finding could be attributed in part to the corresponding 65 % of AT faculty that lack the terminal degree and therefore might not qualify for promotion in rank. It also could be attributed to the 52 % of the respondents that were in continuing/renewable contracts. At many institutions, the eligibility criteria for both the granting of tenure and promotion requires the terminal degree. Among doctorate trained individuals, 47.7 % were on the tenure track and 25 % were already tenured. This is much lower than the 84 % of doctorate trained ATCs on the tenure track reported by Hertel, West, Buckley, and Denegar (2001). In their study, doctorate trained ATCs were solicited from a national

sample and were not necessarily affiliated with a CAAHEP accredited athletic training program. Future studies should be conducted to determine if tenure trends in AT hold stable or if they decline in the next 10 years following accreditation and re-accreditation cycles.

While the number of doctorate trained ATCs has increased, it would also appear that those without the terminal degree continue to be hired and retained at junior ranks without tenure. The overall percentage of tenure-track appointments in athletic training in this study (approximately 27 %) matches the percentage of PDs on the tenure-track reported by Perkins and Judd in 2001. This is down from the 39 % of PDs reported by Perrin and Lephart (1988). It should be noted, however, that the number of full-time faculty members working on the tenure track at colleges and universities has declined in all disciplines over the past 20 years as the reliance of non-tenure track appointments and adjunct faculty positions has increased dramatically (Gravios, 2006). Baccalaureate colleges had the highest percentage of non-tenure track faculty with 57.1 %, followed by doctorate granting universities at 56.1 %, and finally 42 % at masters granting institutions. The largest number of tenure track appointments were found at the Master's granting institutions (36.2 %), followed by the baccalaureate colleges (20.6 %) and the doctorate granting universities (18.8 %). This reported increase in the percentage of tenure-track appointments at master's granting institutions could be an indication of increasing research demands at comprehensive institutions and an attempt to address those needs by requiring greater research output from tenure-track professors (Caison, 2002).

A large majority of non-tenured individuals (68 %) were on one-year renewable appointments. This study did not investigate how long each individual had been at their respective rank, but this is an area that should be investigated in the future. Tenure has been advocated as a means of recruiting the best and brightest to the professoriate (Benjamin, n.d.). If opportunities for tenure are diminishing in athletic training education, it is not known how that will impact the profession in the long term. Interestingly, an additional 8.4 % of respondents in this study indicated their rank as "Other". Many of these individuals indicated a clinical faculty track. It does not appear that a critical mass of institutions sponsoring AT education programs are adopting clinical faculty ranks to account for clinical education and clinical responsibilities in promotion criteria.

Administrative and Clinical Responsibilities

The number of AT faculty reporting multiple administrative and dual appointment positions is decreased from previous studies. In this study, the most frequent administrative position reported was the program director at 38.4 % (n=92). Among these respondents, over 60 % (n=59) indicated working only as the program director without clinical coordinator, department chair, or athletic administrative responsibilities. In 1981, Sciera described the role of program director as being a combined position that oversees the medical care of student athletes and the education of athletic training students. This dual position, the Head Athletic Trainer and Program Director, has declined to represent less than 4 percent (n=8) of the respondents in this study. It would appear that institutions have begun to recognize the time commitment and responsibilities

associated with program oversight and accreditation as well as medical care for student athletes. This is also supported by the 21 % of respondents indicating a Clinical Coordinator only role. The demands associated with recruiting, educating, and coordinating on-campus and off-campus clinical education sites require increasing demands as well, though much less so than the PD. The rise in the number of single appointment positions indicates an increased commitment of resources and personnel by departments and academic administration to the AT programs and to the athletic training service component within athletics as well.

Like many other allied health programs, athletic training has at its roots a clinical orientation. It has been suggested, however, that if the field of athletic training wishes to gain legitimacy within the academy, it may become prohibitive for faculty members to remain clinically active while also meeting the tenure and promotion expectations typically required of full-time faculty members at colleges and universities (Perrin & Lephart, 1988; Hertel, West, Buckley, & Denegar, 2001; Starkey & Ingersoll, 2001; Ingersoll, et al., 2005). Others have argued in favor of clinical practice, however, as being a vital component of a faculty member's role. Clinical practice lends legitimacy in the classroom as well as an environment to generate research questions (Piscopo, 1994). If clinical practice is to be valued as a contributor to the professional development of future athletic training students, then faculty workload systems should recognize, evaluate, and reward faculty for their service.

The distribution of clinical faculty positions within this study is comparable to the national sample of athletic training educators. Of the 1574 NATA members initially

identified for this study, 41 % indicated being employed in a dual appointment position at a college or university. Among the final group of respondents, 47 % reported having clinical appointments or responsibilities in addition to their teaching load. Among PDs, however, the trend has shifted considerably from previous studies. In this study, only 37 % of PDs reported clinical responsibilities. This is a significant decrease from the clinical responsibilities for PDs reported by Staurowsky and Scriber (1998), Perkins and Judd (2001), and Perrin and Lephart (1998), 30 %, 58 %, and 80 % respectively. This may indicate that academic and athletic administrators, as well as program directors assuming these positions, have recognized the difficulty of managing athletic training service responsibilities in addition to the administrative requirements to run an accredited program. It also may be an indication that the CAATE, and previously CAAHEP, standards requiring comparable release time for program administration have caused some PDs to drop clinical practice within their workload allocation (CAAHEP, 2001; CAATE, 2006). This influence of clinical practice on academic role strain will be presented later in the chapter.

Workload

Athletic training faculty tend to work longer hours than the typical 40 hours per week. The average number of hours worked per week (53.92 ± 11.42) reported in this study was similar to that reported by Staurowsky and Scriber (1998). Individuals with clinical practice responsibilities worked slightly more hours per week (55.6 ± 8.4) than academic only faculty members (51.45 ± 12.72). This may be a contributing factor to

the increased academic role strain reported by clinical academics in comparison to individuals without clinical assignments.

When comparing the ideal and actual percentages of time spent on traditional faculty roles, the respondents reported wanting to spend less time on administration, service and travel than actual, and increasing the percentage of time spent on research. The differences between the actual and ideal percentage of time spent on teaching and clinical practice were less than 1 percent. Though AT faculty may enter the professorate with a desire to decrease the total number of hours worked in comparison to the hours typically reported by clinical ATCs, the number of hours worked per week continues to be beyond the traditional 40 hour work week (Leard, Booth, & Johnson, 1991; Judd & Perkins, 2004). The number of hours worked per week also resulted in a significant positive relationship with role strain scores and is discussed later in this chapter.

*Institutional Characteristic*s

This was the only study found that examined the institutional characteristics of entry-level programs and AT program faculty. The data indicate that CAATE accredited entry-level programs are found at all Carnegie Classification levels and are evenly divided between public and privately funded institutions. The typical AT faculty member works in a Department of Kinesiology in accordance with the professions roots in physical education. A quarter of the programs were found at institutions that did not delineate departments into schools or colleges. This would coincide with the 25 % of respondents that reported working at Baccalaureate Colleges. Of the departments that do

operate within a school affiliation, the most common school reported was Education, followed by HPER and Arts and Science. The number of AT programs housed within schools and departments of allied health is less than 20 %. In 1997, the NATA Education Task Force recommended that AT programs begin to move towards affiliations with allied health and medicine (NATA, 1997). Though athletic training wishes to be viewed as an allied health profession, its historical transition from physical education to a science based health profession within the broader field of kinesiology continues to carry significant weight in terms of its departmental affiliation. Though the trend towards allied health departments has begun, athletic training education programs will continue to have to make the case for leaving its traditional relationship with kinesiology and physical education.

No studies were found which reported the distribution of athletic training faculty according to the newly revised 2005 Carnegie Classifications. The one study that used the 2000 Carnegie Classifications by Hertel, West, Buckley, and Denegar (2001) did not report the distribution between doctorate granting institutions and non-doctorate granting institutions. Forty two percent of the respondents in this study were employed at institutions classified within the Master's Colleges and University level. The remaining respondents were evenly divided between Doctorate granting universities (26.4 %) and Baccalaureate Colleges (25.2 %). Due to anonymous responses to the survey instrument, it was not possible to track the respondent's institutions and know whether multiple individuals from the same institution responded to the study. No research studies or statistical data were found which reported the Carnegie Classifications of the 338 ATEPs

now accredited by the CAATE (CAATE, 2006). Future research is needed to examine the growth trends in recent years and to determine how ATEPs are distributed across the Carnegie Classifications. Directors of graduate programs in AT as well as faculty advisors should be counseling doctoral students on the job prospects in AT, discussing the varying types of role responsibilities at accredited institutions, and preparing them to balance the demands of teaching, research, and service in accordance with each institution type and mission.

Academic Role Strain, Academic Role Orientation and Intent to Leave

Academic role strain has been previously reported among allied health faculty, and nursing faculty in particular. No studies were found that examined academic role strain and academic role orientation among athletic training faculty at CAAHEP accredited institutions. Based on the review of the literature, it was expected that athletic training faculty would report moderate degrees of role strain with role overload and role conflict identified as the leading stressors. Additionally, it was expected that factors associated with the role occupant, the role, and the role setting would all influence role strain scores. Furthermore, academic role orientation and role orientation congruency were expected to have a significant impact on academic role strain and subscale scores. Finally, it was expected that elevated role strain would have a significant impact on an individual's intent to leave their institution and pursue other employment opportunities.

Generalizability

The results of the academic role strain and role orientations surveys and the conclusions drawn from these data can be generalized to the population of full-time athletic training educators employed at CAATE accredited programs. Though the response rate was lower than desired, as stated earlier, the demographics of the respondents mirrors the national population of athletic training faculty affiliated with the National Athletic Trainers' Association. In addition, the results of the reliability analysis were consistent with previous examinations of academic role strain using the RSS in nursing education (Mobily, 1987; Piscopo, 1994; Oermann, 1998) and in athletic training (Brumels, 2005; Henning & Weidner, 2007). The 55 –item Role Strain Scale – AT Educator version resulted in moderate to high inter-item reliability as indicated by the Cronbach's alpha scores ranging from 0.712 to 0.948. Similar reliability values have been found when using other modified versions of Mobily's scale to examine role strain among teacher/athletic trainers in the high school setting (Pitney, 2004) and athletic trainers in the collegiate setting (Henning & Weidner, 2007; Brumels, 2005).

Leading Components of Role Strain

Role strain has been found to involve multiple elements including role conflict, role overload, role incompetence, role ambiguity and role incongruity. Role conflict has been further divided into three areas: inter-role conflict, intersender role conflict, and intrasender role conflict (Hardy & Hardy, 1988). Within academe, the traditional faculty responsibilities associated with teaching, research, and service have the potential to raise

role strain issues. Faculty members employed within athletic training programs are no exception.

Among the seven subscales, it was expected that athletic training faculty members as a group would report role overload and inter-role conflict as the most significant causes of role strain. As expected, the mean of the scores on the role overload subscale was the highest reported source of role strain. Inter-sender role conflict was ranked second. Role incompetence was the least rated source of role strain. In contrast to the hypothesis, the mean scores on the inter-role conflict subscale was ranked sixth out of the seven subscales on the role strain scale. These findings support results in other studies examining role strain among athletic trainers. Both Brumels (2005) and Henning and Weidner (2007) reported role overload as being the leading components of role strain in their investigations followed by role conflict.

Also as described earlier, previous reports of faculty workload in athletic training reveal continued trends towards heavy work place demands for time. Judd and Perkins (2004) reported that work load, expectations, and clinical involvement were the least beneficial aspects of the program director's role. The number of hours worked per week among the faculty in this study was not significantly different than previous reports of the hours worked per week for clinical athletic trainers in collegiate settings (Staurowsky & Scriber, 1998; Hendrix, Acevedo and Herbert, 2000; Brumels, 2005).

In addition to the positive correlation in this study between the number of hours worked per week and total role strain and subscale scores, it should be noted that role overload involves both quantitative and qualitative components. Overload can occur as a

result of too many obligations (quantitative overload) as well as having feelings that the amount of work interferes with how well the duties are completed (qualitative overload). When asked to indicate the five greatest stressors in their work lives, the most predominant theme to emerge was the need for workload balance. That balance might require balancing personal life with work life. It might also involve balancing the multiple role responsibilities at work simultaneously. One respondent wrote "people are always needing something from me all day long". Another respondent wrote that the "time needed to fill all the roles required to do the job right" as the greatest stressor in balancing person-work demands. Another described their challenges with personal-work balance as "feeling the pull to be doing things for work when I am doing things with my family and vise versa [sic]".

Within athletic training, elements of role strain have also been examined under the framework of burnout. Beginning in the mid 1970's, burnout appeared repeatedly in the professional literature to describe the feeling of "becoming exhausted by making excessive demands on energy, strength and resources (Freudenberger, 1974, p. 159)". Vergamini (1981) and Gieck, Brown, and Shank (1982) were the first to describe the phenomenon within athletic training and its impact on care giving professions. Others have found that burnout scores for athletic training ranged from low (Capel, 1986) to moderate (Hendrix, Acevedo, Hebert, 2000) in comparison to other care givers and coaches. Role conflict and role ambiguity have also been reported as factors in the development of burnout. Additional variables such as hours worked, perceived stress, and social support have also been linked with burnout scores in athletic trainers.

Outside of athletic training, role overload has repeatedly been identified as the leading contributor to role strain and stress among faculty in higher education. Within nursing, faculty with and without clinical teaching responsibilities report role overload as the greatest source of role strain (Mobily, 1991; Piscopo, 1994; Oermann, 1998; Hanna, 2000). Hanna reported that the most significant sources of role strain were associated with academic reform, restructuring, technology, and interdisciplinary focus. Within kinesiology, role overload has been correlated with the potential for burnout among faculty in teacher education as well as coaching (Massengale, 1981; Decker, 1986; Darylchuck, 1993; Williamson, 1993; Kelly & Gill, 1993). Kelly and Gill (1993) found that social support, gender, and experience were predictors of burnout among teacher-coaches. In physical therapy, Harrison, Kelly, and Soderberg (1996) indicated that faculty frequently described increased lonelineness, tenure anxiety, heavy work loads, and the desire for more guidance from colleagues. Gmelch (1995) described faculty role overload as overstimulation and suggested that it could lead to emotional and physical exhaustion.

Tierney (1999) argued that the nature of faculty work has changed considerably over the past 2 decades and continues to involve greater complexity and demands. Where previously, faculty were bound by the traditional semester based format with a summer respite from teaching and/or service, this has gradually been replaced by year-round research demands, grant cycles, distance and hybrid education, and increasing accountability. Additional expectations for faculty to use active and engaged learning practices requires more time for teaching preparations and utilizing technology in the

classroom without a diminished expectation for research output. Milem, Berger, and Dey (2000) concluded that the amount of time faculty spent on all work related activities had increased significantly since 1972. Using the 2000 Carnegie classifications, they reported that time spent on teaching had increased across all institution types, but that time spent on research had increased most at the doctorate and research institutions. Unfortunately, the amount of time advising had decreased at all institution types as well. Future research into role strain should examine more specifically the issues of role overload. The results of this research indicate that several demographic variables are also related to the development of role strain.

Factors Influencing Academic Role Strain

Within the framework of role theory, the study of role strain has been divided into examination of the role, the role occupant, and the role setting (Hardy & Hardy, 1988). Within this study, the role under examination was full-time faculty employment in an entry-level athletic training education program. The role occupants were the respondents to this survey and the personal and educational characteristics unique to each individual. Finally, the role setting included the institutional characteristics which included features of the program, the department, and the institution. Additionally, role orientation and role orientation congruency were examined to determine their influence on academic role strain and subscale scores.

The Role Occupant

Among the demographic characteristics examined, years of AT education experience, gender, and educational preparation resulted in significant differences in total role strain or one of the subscales. Individuals with between 5 and 9 years of experience reported the highest total role strain and was significantly higher than those with 0 to 4 years and those with more than 20 years of experience. It was expected that individuals with less than 5 years of education experience would report the greatest total role strain due to the stress of acclimating to the faculty responsibilities. Research among new faculty in physical therapy indicated that the first 3 years of employment were reported as the most stressful as faculty adjusted to their roles (Radtka, 1993). Furthermore, the early years of the professor's career often coincides with stressful personal life events including marriage and parenthood. It was surprising, then, to find that years of experience at the current institution or marital did not reveal significant relationships with total role strain. It was also surprising to find that individuals without dependents reported higher role overload scores than individuals with dependents. There is the possibility that individuals with dependents are better able to balance their work and personal life demands, or alternatively, that supervisors are more willing to make concessions to individuals with dependents. The impact of the parenting role on faculty stress should be studied further among athletic training educators.

Of the personal demographic variables examined, gender revealed significantly higher role overload and role incompetence scores for females than males. Henning and Weidner (2007) reported similar findings for women when examining role strain among

approved clinical instructors in the collegiate settings. Traditional responsibilities ascribed to women including childcare and management of the household may have contributed additional influence on the role overload reported in this study. Within the nursing faculty literature, little research has focused on gender as the majority of faculty members in that discipline are females. Within academic medicine, females report significantly higher levels of stress having to decide when to have children, balancing the demands of motherhood and career, and lower salaries (Robinson, 2003). Surprisingly, though, females in academic medicine report significantly higher job satisfaction than males.

The differences in role incompetence scores should be a concern for AT faculty and should be examined further. It is not know if the differences between males and females is a factor of inadequate preparation for the faculty role or some other factor related to perceived self-efficacy. There is the possibility that females were more willing to report feelings of inadequacy and incompetence whereas males were uncomfortable recognizing and reporting their needs for improved skills and abilities. In order to enhance the professional preparation of future faculty members, research should examine differences in perceived effectiveness among AT educators.

Level of education and concurrent enrollment in a doctoral program both resulted in significant differences in role strain scores. The educational preparation of the individual may serve as a factor in determining the types of expectations placed upon faculty. In this study, doctorate trained faculty members reported higher total role strain scores and all subscale scores than those with a master's degree. Oermann (1998)

reported similar findings among both doctorate trained nursing faculty and those faculty involved in clinical practice. The reverse was true for Mobily (1987), however. In her study, doctorate trained nursing faculty reported lower role strain scores. Individuals with the doctorate are more likely to be on the tenure track than on continuing/renewable contract status. As such, the tenure evaluation criteria may place greater emphasis on research/scholarly activity than a renewable contract position that might allow a faculty member to engage in significant amounts of service work such as program administration or clinical practice and be rewarded for such responsibilities.

A number of faculty members in AT without terminal degrees are taking on the additional responsibility to complete a doctorate. Of the respondents indicating a Masters as their highest degree, 28.8 % (n=47) indicated being currently enrolled in a doctoral program. These findings are increases over previous reports (Perrin & Lephart, 1988; Perkins & Judd, 2001; Hertel, West, Buckley, & Denegar, 2001). Concurrent enrollment in doctorate studies while also working full-time outside of the institution carries with it unique challenges and increased role strain (Mobily,1987). The individual is attempting to complete the requirement of their employer while also meeting the rigorous demands of advanced graduate study. Individuals completing doctoral studies while also employed full-time at another institution are not often able to engage in the same level of laboratory research as full time students working as research assistants and teaching assistants due to time commitments to their full-time employer. Additionally, the requirements of the full-time employment may also impede the student's ability to balance graduate studies with personal life demands. Knowing these issues, it was not

surprising to find that enrollment in a doctoral program resulted in higher inter-role conflict scores than those not enrolled in a doctoral program. It should be noted, however, that there was no difference in inter-role conflict scores between doctorate trained faculty and those enrolled in a doctorate. There is the possibility that balancing the demands of teaching, research, and service (in combination) raise greater inter-role conflict than teaching and service alone.

As the number of athletic trainers pursuing doctorate training and faculty status continues to rise, again, it is essential that individuals be counseled with regard to the expectations of new faculty at varying institution types, the strategies to balance the demands, and be provided with examples how clinical education, clinical practice, and program administration can be integrated into scholarly activities that are recognized.

The Role

Among the employment characteristics examined, rank, tenure status, and clinical responsibilities revealed significant differences in role strain scores. Professors and associate professors reported lower role ambiguity than assistant and instructor level faculty. Similarly, tenured faculty also reported lower role ambiguity scores than tenure-track faculty and continuing/renewable contract faculty. Faculty with clinical responsibilities reported greater inter-role conflict than non-clinicians.

The relationship between rank and tenure on role strain can most likely be attributed to greater seniority, stability, and security associated with tenure and position. Senior faculty have the years of experience to know what is expected in their role and

have had the experience of being evaluated for tenure, promotion, and post-tenure review in some cases. The results indicating higher role ambiguity for assistant professors and instructors may indicate a need for greater communication and mentoring to explain what the individual's responsibilities are and how to best navigate evaluations to meet the mission of the department and the institution.

It was surprising to note that individuals with ranks classified as "other" reported role ambiguity scores significantly higher than professors, associate professors, and assistant professors. As indicated earlier, 8 % of the respondents indicated a rank of "other". These positions often carry long-term renewable contracts as clinical professors in non-tenure earning positions. As such, the responsibilities associated with the positions tend to emphasize teaching and service heavily where as tenure-track positions are more often associated with the traditional faculty responsibilities: research, teaching, and service. Therefore, the duties associated with these clinical faculty positions do not lend themselves to the same types of evaluation and promotion criteria as tenure track positions. This increases the likelihood of role ambiguity. Future research should examine the workload and evaluation criteria of non-tenure track faculty to determine what factors increase the role ambiguity in these positions. Faculty working in clinical professorships must understand their roles as well as understand the subtleties of their evaluation and promotion criteria to effectively balance the demands of their service and clinical loads in addition to teaching, and in some cases, research.

The fourth element of the athletic training faculty role that was significantly related to role strain was clinical appointment status and clinical education. It was not

surprising that academic clinicians in this study reported significantly greater inter-role conflict than non-clinicians. Brumels (2005) reported that the role complexities of collegiate athletic trainers with joint appointments (faculty/clinician) were greater than clinicians without faculty rank. Similar findings for inter-role conflict and total role strain have been reported among clinical nursing faculty (Golden & Waddell, 1990; Piscopo, 1994; Oermann, 1998). Decker (2005) reported that occupational therapy faculty are often limited to less than 5 hours per week of clinical practice. Those that do engage clinically are often doing so against substantial barriers.

The ability to effectively navigate the two elements of the academic environment and the intercollegiate athletic environment places unique challenges on the faculty member. As an example, one faculty member wrote that "Athletic staff / coaches not understanding the demands put on me by my academic responsibilities" was the most significant stressor in his life. The academic clinician AT has several immediate supervisors in their academic unit as well as the athletics department. This is consistent with the reports by Staurowsky and Scriber (1998) in describing the conflict between personnel evaluations and supervisors. Additionally, the issue of control and autonomy also must be addressed. As a faculty member, one has the ability to control when office hours are made available, how to structure one's day around classes and meetings, and has a more "normal" work schedule. The nature of athletic training clinical service has historically involved a considerable amount of afternoon, evening, and weekend work and a lack of control over time. This is exacerbated by, as one respondent put it, "coaches that change practices at a whim without understanding my needs to be ready for

classes in the morning". Another respondent wrote, "clinical practice is taking over too much time and don't have enough time to prepare for classes". Individuals assuming both academic and clinical roles can balance the two demands, but in order to do so, the expectations on the individual's availability must be tempered and reasonable. Athletics department staff must understand the faculty member's responsibilities for classroom instruction, scholarship, and service while the academic supervisor as well as review committees should be educated on the demands of clinical education while supervising athletic training students and the demands of athletic training service while treating patients.

In spite of the difficulties presented by clinical practice, almost 50 % of the respondents currently balancing clinical practice with teaching, indicated that they either rarely or never consider leaving clinical practice to remain in athletic training education. This is tempered, however, by the fact that more and more faculty are taking on positions without clinical responsibilities. It is likely in response to both the challenges of tenure and promotion as well as the inter-role conflict associated with the dual appointment role. If academic clinicians are assuming the responsibilities for athletic team assignments, then it is essential that they communicate their needs for structure and dedicated release time for class preparation, program administration, and/or research to the coaching staff, their athletic director, and their department chair. Additionally, methods to weigh the benefits of clinical practice and clinical education as something that "counts" towards tenure and promotion, annual teaching load, or contract renewal should be clarified to minimize total role strain, and inter-role conflict specifically.

The Role Setting

Among the departmental and institutional characteristics examined, school affiliation, departmental affiliation and public/private affiliation revealed significant differences. Other variables such as Carnegie Classification, athletics affiliation, program size, and program stability had no reported effect on total role strain or subscale scores. Individuals employed at institutions that did not delineate by school reported higher role incompetence scores than individuals employed in schools of allied health/medicine and schools of education. Additionally, the departmental affiliation also influenced role strain scores. The results of the findings in this area should be examined with suspicion, however, due to the low number of individuals working within the departments of natural sciences.

It was surprising to find no significant differences in role strain between individuals according to Carnegie Classification, athletic affiliation, program stability, or program size. It was expected that faculty employed at doctorate granting institutions would report higher role strain scores. This was in part due to the extensive research, publication, and grant writing ability essential to the institutional mission of these types of institutions. It was expected that balancing the demands of teaching and administering an athletic training program while simultaneously pursuing a line of research would generate greater role strain. It was also expected that faculty employed at NCAA Division III schools would report greater role strain in part due to the limited resources available for staffing. The lack of significance across institution types may indicate that role strain is pervasive across the profession regardless of employment

environment. Other factors such as workload, distribution of work, and role orientation may have a more salient impact than the role setting. No previous reports were found comparing institutional types within the athletic training literature. A comprehensive study of the characteristics of CAATE accredited programs should be conducted and made available to examine their distribution according to institution type and faculty responsibilities.

Role Orientation and Congruency

Within this study, academic role orientation was defined as the degree to which a faculty member emphasizes their responsibilities within the areas of teaching, research, and service. The majority of AT educators indicate that teaching was primary to both their ideal and actual role orientations as faculty members. Teaching was identified as a primary area of emphasis in all three of the ideal orientations chosen most frequently: TrS, Trs, and TRs, respectively. This is consistent with the findings reported by Brumels (2005) examining AT faculty with dual appointments. Within the actual role orientations, 50 % (n=126) of the respondents indicated that their actual orientation was TrS, teaching and service equally important. Twenty eight percent (n= 70) indicated that their actual orientation was Trs, teaching as prime commitment. Few respondents indicated their actual role orientation as primarily emphasizing research (tRs) or service only (trS), 1.2 % and 8.0 % respectively.

This matched the amount of time faculty reported actually spending on teaching as well. Faculty reported spending nearly 50 % of their time teaching with the remaining

time heavily dedicated towards service and less than 10 % towards research. The service component in this study was evenly divided between clinical practice (15.91 %), departmental administration (14.88 %), and other service work (12.25 %). This corresponded to the nearly three-quarters of the respondents that indicated their ideal role orientation would allow them to focus primarily on teaching (27.6 %) or a blended emphasis on teaching and service (44.8 %).

When asked to identify the role orientation appropriate for their institution's mission and goals, again the most frequent role orientation was TrS (42.8 %,). Similar results were found for colleagues' role orientation and the role orientation encouraged by the respondents' supervisor. When asked to respond to the role orientation most appropriate for athletic training and AT education, again TrS was most frequent, however, the next most frequent response was Type VII (TRS) where teaching, research, and service were of equal significance and importance. Similarly, when asked to identify the role orientation of role models, TrS was the most frequent (34.4 %, n=86) followed by TRS (26.0 %, n = 65). These two areas, the needs of the profession and role models, were the only two areas where TRS was prominent. Less than one percent of the respondents indicated that athletic training education and the profession should pursue research as the primary area of emphasis (tRs). This is not to say that research was not valued by the respondents. In fact, the role orientation congruency and ideal workload distributions analyses indicated that faculty desire more time to focus on scholarly activities.

When examining role orientation congruency, the majority of AT educators were incongruent, not only between their ideal and actual role orientations, but also with the perceived role orientations of their institutions, supervisors, and colleagues. In this study, an individual's ideal role orientation matched with actual role orientation in approximately 40 % of the participants. This trend also was the case between their actual role orientations and the perceived role orientations of their role set with the exception of actual–supervisor congruency. The majority of respondents (55.4 %) indicated that their actual role orientations as faculty members were similar to the expectations set by their immediate supervisors, though the opposite was true for the ideal-supervisor congruency. This congruency between actual and supervisor's expectations would in theory minimize a faculty members role ambiguity and intra-sender role conflict. If the supervisor's espoused expectations match the actual responsibilities of the individual, then role strain should be managed effectively.

This was in fact the case when examining the relationships between supervisor , colleagues, and institutional role orientation congruency and role strain. Individuals with ideal-supervisor incongruity and those reporting actual-supervisor incongruity reported higher total role strain and subscale scores except for role incompetence. Similarly, ideal-colleague incongruity resulted in higher total role strain and subscale scores except for role incompetence. Actual-colleague incongruity resulted in higher total role strain scores as well as inter-role conflict, role conflict, role incongruity, and inter-sender role conflict subscale scores. AT educators that report having ideal role orientations in contrast to their supervisors and their colleagues have the challenge of balancing their

workload and the demands of their positions which may not be in agreement with other faculty members in their departments. In was expected that role orientation incongruity would be positively correlated to role incongruity. Mobily (1991) reported a similar finding that resulted in a positive correlation between both actual supervisor and ideal supervisor incongruity and role strain. Daniel (1983) reported significant correlation between job satisfaction among teacher/coaches when their role orientations matched with the traditional academic role rather than the coaching role. Further research should be conducted to examine the extent of role orientation incongruity and the impact of personal variables or institutional/setting variables. Additionally, faculty should be counseled to examine their own ideal role orientation when examining their current employment setting and future position vacancies. Role orientation incongruity influences the perception of role strain and may lead the individual to consider leaving their position and pursuing other employment opportunities.

Academic Role Strain and Intent to Leave

Previous reports of athletic training faculty members intent to leave their institutions and/or the profession were not found in the published literature. Previous studies have examined job dissatisfaction and organizational commitment as a predictor of turnover, but no research was found to assess individuals expressed intent to leave their institution or the profession (Klenke-hamel & Mathieu, 1990; Winterstein, 1998; Judd & Perkins, 2004; Gormley, 2005). The majority of AT educators appear to desire stability in their positions and have a low intention to leave. Faculty that report high total

role strain scores, though, are more likely to report a higher desire to leave their institutions, a desire to leave clinical practice, leave AT education to pursue other employment in higher education, and to leave higher education entirely.

Just under 50 % of the respondents indicated that they either "rarely" or "never" have a desire to leave their current institution, while approximately one-third had considered it "sometimes". Ten percent reported "frequently" considering leaving their institution. In physical therapy, a 10 % turnover rate among newly hired faculty was reported and positive correlations were found between years of experience, salary, and stress level and turnover (Radtka, 1993).

It is interesting to note that a combined two-thirds of the respondents reported that they "never" or "rarely" have considered a departure from AT education to remain or return to clinical practice. These faculty members appear to be content in their roles as faculty members and do not express a desire to return to clinical practice exclusively. Of those individuals that were currently involved in clinical practice, 53.1 % indicated that they "never" or "rarely" consider a move towards an AT education only position, whereas 15.8 % indicate that they consider it "frequently" or "nearly all the time". This results in a unique and challenging circumstance. Individuals employed as academic clinicians report higher inter-role conflict scores, and simultaneously a relatively strong desire to remain clinically active. The actual amount of time spent in clinical practice varied widely and may have been a confounding variable. Future research should be conducted to examine the influence of time spent in clinical practice and its impact on faculty turnover and job satisfaction.

The intent to leave among AT educators was relatively low in this sample of participants. Approximately 15 % of the respondents indicated that they have considered leaving AT education to remain in higher education "frequently" or "nearly all the time". Whereas, over 70 % of the respondents indicated that they "never" or "rarely" consider leaving higher education to pursue other employment possibilities. This bodes well for the profession. If attrition of the profession has been a rising concern within the NATA membership, it would be more concerting if faculty were also leaving for other opportunities. Research among faculty in allied health and in higher education indicates that job dissatisfaction, age, gender, salary, nature of the work, and social support are strong predictors of intent to leave an organization (Zey-Ferrel & Baker, 1984; Heckert & Farabee, 2006). Amount of time commitment and sense of community were also related to intent to leave academe (Barnes, Agago, and Coombs, 1998). Organizational commitment has also been found to predict an individual's intent to exit or turnover intention among nursing faculty (Gormley, 2005). Future research in athletic training should examine additional personal variables such as age and gender as well as employment characteristics to determine their influence on turnover rates among AT educators.

Suggestions for Addressing Academic Role Strain

In order to moderate the effects of academic role strain, it is suggested that strategies be developed to assist aspiring and novice athletic training faculty to prepare for the professoriate. Second, current faculty members should be provided with

educational opportunities to assist them in recognizing role strain and coping with its effects. And finally, individuals that interact with and supervise AT faculty members should also be educated on the potential of academic role strain so that they are cognizant of the need for resources and support.

For athletic trainers considering a career in academe, it is essential that they understand the role complexities of faculty life and the differences between institution types. A majority of AT educators in this study reported an ideal role orientation that emphasized teaching and service or teaching only. This role orientation may be incongruent with the mission and values of the doctorate and masters granting institutions sponsoring entry-level AT programs, especially those classified as very high and high research emphasis. Doctoral students should be exposed to the job descriptions and the criteria for promotion and tenure at the Baccalaureate, Masters, and Doctorate granting institutions. They should also examine their own ideal role orientation and skill sets to determine the type of positions and institutions that best match their abilities. Additionally, young faculty should be cautioned against taking on positions that require extensive administrative responsibilities, such as the Program Director role, without an understanding that service will be considered in their workload and adequate release time is allocated from teaching. Finally, athletic trainers transitioning from clinical positions to faculty positions should recognize that while the nature of the work is different, the potential for role overload and role strain still exists.

Clinicians considering a change of setting to pursue an academic appointment should understand that the locus of control changes from a coach, patient, or athletic

department centered focus to an individual and student centered focus. The scheduling of time varies much more considerably. With the exception of classroom instruction and committee work, the faculty member has much more flexibility in terms of time to engage in the duties associated with teaching, scholarship and service. One consideration, however, is that the faculty member's evaluation for continued employment, possibly tenure, and promotion is completely different than the evaluation for a renewable contract staff member. The expectations for teaching excellence, research and scholarly activity, and service to the institution, the discipline, and the community are evaluated by committees of peers followed by supervisors. This level of scrutiny during the faculty evaluation process may contribute to role strain that is different from the role strain experienced by staff. Becoming a member of the faculty and taking on an educator role does not appear to lessen role strain than that experienced by collegiate athletic trainers. The nature of the work is different as are the expectations and the rewards.

For individuals currently serving in faculty roles in entry-level programs, the first strategy to minimize role strain is to recognize that there is an element of stress balancing the demands of teaching, research, service, and clinical practice associated with faculty life. Faculty members should seek out appropriate mentors and role models that exhibit the ability to balance multiple roles, are successful, happy, and fulfilled both personally and professionally. The faculty mentor relationship provides an individual with someone that will both challenge and support them professionally. Second, faculty should pursue continuing education and professional development opportunities to enhance their areas

of strength and address weaknesses to minimize perceptions of role incompetence. For example, if a faculty member's ideal role orientation is to spend the majority of their time engaged in teaching and service, yet the institution and supervisor expect an emphasis on teaching and research, then the faculty member should seek out methods to pursue the scholarship of teaching. By systematically examining the practice of one's own teaching within athletic training, the faculty member would not only be utilizing their preferred orientation but also be able to enhance the evidence for effective teaching, share it with other AT educators, and engage in valuable research that is essential to the continued development of AT education programs. Another option for senior faculty is to pursue opportunities for faculty renewal such as fellowships and sabbatical leave. These enrichment activities provide the faculty member a time to pursue interests not normally available during the typical academic year. It serves as a time to rejuvenate, retool, and gain a new perspective on one's responsibilities. Finally, if a faculty member's level of role strain has exceeded her/his capacity to cope and negotiations cannot be reached within their position, then the faculty member has to consider a change of employment. It would be better for a faculty member to pursue another employment setting than to transition from perceptions of role strain to the development of more significant psychological distress such as burnout or depression.

In order to effectively balance role strain, it is also essential that administrators be aware of the potential for role strain among their current faculty and future employees. Supervisors should communicate with their faculty their expectations and work to ensure that they are mutually agreeable whenever possible. Department chairs and deans should

also ensure that evaluation criteria are communicated effectively to minimize role ambiguity and inter-sender role conflict. Administrators should recognize and provide the necessary resources and release time where appropriate to meet the demands of each position. In an ideal situation, deans and department chairs would be willing to assist a faculty member in meeting both the needs of the institution while also meeting one's own professional needs. In order for that to occur, however, communication must be deliberate and the AT educator must make the supervisor aware of one's needs and any perceived barriers. If a faculty member is experiencing significant role overload or role conflict, then strategies such as release time for significant administrative, clinical, or research loads or additional faculty lines should be requested. In the case of academic clinicians, the faculty member must not only communicate with the academic supervisor, they must also make the athletics supervisor aware of the multiple roles that they carry and the demands of each. Finally, during the hiring process, administrators must make every effort to ensure that the institutional orientation and needs matches the individual's preferred orientation and skills.

Limitations of the Study

The present findings point to several limitations. One was related to the sample and the response rate. The sample was taken from a national database of the members of the NATA and recruited using an e-mail and ground mail contact strategy. Efforts were made to ensure delivery of the e-mail call for participation to the sample, however, there is the possibility that "spam" filtering software prevented the request from reaching all potential participants. Second, the individuals were recruited to participate in this survey without stratification for geography or institutional type. Therefore, it is possible that geography and Carnegie Classification may influence the findings. This research needs further investigation using representative samples of athletic training educators and institutions from the 10 districts of the NATA to examine whether geography influences academic role strain, role orientation, or intent to leave. It would also be helpful if the CAATE would provide Carnegie Classification data for accredited institutions so that comparisons could be made across institution type.

A second limitation to this study is related to response bias. It was not possible to track non-respondents to this survey and therefore, it is impossible to determine if the demographic characteristics, role strain scores, role orientations, and intent to leave of the respondents differed significantly from non-respondents. The method utilized to solicit responses from individuals may have also allowed more than one individual from a single institution to respond to the survey. Therefore, there is the possibility that institutional characteristics may have overemphasized specific findings as a result of multiple respondents from the same institution. Future studies utilizing web-based surveys should

attempt to use subject coding strategies to conduct follow-up phone calls or mailings to determine any differences between respondents and non-respondents and to control for institutional distributions.

Suggestions for Future Research

Future studies should be conducted to examine the demographic characteristics, role strain scores, and role orientations of faculty in post-certification graduate education programs in athletic training. Though the majority of the current faculty are preparing the next generation of athletic trainers at the entry-level, the preparation of future members of the AT faculty relies on the graduate faculty at these institutions. The differences between the perceived demands and rewards of graduate education and entry-level education should be explored further.

Studies should also be conducted to examine the influence of personal characteristics and socialization experiences on ideal role orientation. To better prepare faculty for the role orientations appropriate for a variety of institution types, it would be helpful to know what factors affect the emphasis individuals place on their teaching, research, and service roles.

Studies should continue to explore the issues of role orientation incongruency and extend the research to examine job satisfaction, faculty productivity and effectiveness, and turnover. Job satisfaction can be examined globally, but it can also be broken down into satisfaction with pay, locus of control, conflict with personal and family time, and prestige. Faculty productivity can be explored in relationship to teaching effectiveness

and scholarly output. Finally, longitudinal studies of faculty turnover should be conducted to determine what variables extend beyond intent to leave and result in faculty attrition

Finally, identification and testing of various coping strategies and rewards to minimize academic role strain would be valuable. Due to the impact of high role overload as a leading contributor to role strain, studies of workload among program faculty and administrators should be conducted. Additionally, faculty development seminars should be developed and evaluated to determine their effectiveness in minimizing perceived role strain.

Conclusions

This study explored the personal, employment, and institutional characteristics of athletic training educators, degree and components of role strain, academic role orientations, and intent to leave. The findings of this project indicate that athletic training educators experience a moderate degree of role strain with role overload and inter-sender role conflict as leading components. Most athletic training educators would prefer a position that primarily emphasized teaching and service or teaching only. The majority of AT educators' ideal role orientations were incongruent with their actual orientations, their colleagues' expectations, their institution's mission and values, and their supervisors' expectations. Actual role orientation incongruity was significantly related to higher role strain and subscale scores. Individuals reporting the highest levels of role strain also reported frequently considering leaving their institutions, the

profession, and higher education. As athletic training education continues to progress in its reform efforts, it will be necessary to address the issue of role strain to ensure the health and welfare of the faculty responsible for these programs.

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APPENDIX A:
INSTITUTIONAL REVIEW BOARD APPROVAL

12/14/2004

THE UNIVERSITY OF NORTH CAROLINA

GREENSBORO

DEC 2 2 2004

IRB File NUM:

045131

TITLE: The use of an on-line survey for the assesment of academic role strain: a pilot study of North Carc

PI: Liscombe.Robert **DEPT:** ESS

CO_PIS:

FACULTY SPONSOR: Perrin. David

JAN 2005

Action Taken:

_____ eXempt from Full Review

__✓__ Expedited Review

_____ Full IRB Review

Disposition of Application:

__✓__ Approved

_____ Disapproved

MODIFICATIONS AND COMMENTS:

IRB Chair/Designee

APPROVAL DATE*: 12/21/04

EXPIRATION DATE*: 12/21/05

*Approval of Research is for up to **ONE** year only. If your research extends beyond one year, the project must be reviewed before the expiration date prior to continuation.

THE UNIVERSITY OF NORTH CAROLINA

GREENSBORO

IRB File NUM:

045131

Application for Modification to an approved IRB.

TITLE: The use of an on-line survey for the assesment of academic role strain: a pilot study of North Carol

PI Liscombe.Robert **DEPT:** ESS

CO_PIS:

FACULTY SPONSOR: Perrin. David

MODIFICATIONS AND COMMENTS:

IRB ~~Chair~~/Designee

APPROVAL DATE*: 1/24/06

RECEIVED
JAN 2 6 2006

Very good modifications
Easy to follows.

*Approval of Research is for up to **ONE** year only. If your research extends b
before the expiration date prior to continuation.

APPENDIX B:
CORRESPONDENCE REQUESTING PARTICIPATION

(FIRST AND SECOND E-MAIL SOLICITATION)

Dear Athletic Training Educator,

I am an assistant professor of athletic training at Greensboro College in Greensboro, North Carolina, and am currently pursuing my Ed.D. degree in Exercise and Sport Science at the University of North Carolina at Greensboro. As a part of my dissertation, I am examining the work experiences, tensions, and difficulties that athletic training faculty experience as a result of their roles in CAAHEP accredited entry-level programs and NATA accredited post-certification graduate programs. I received your name and contact information from the NATA membership database. I am asking for your assistance in completing an on-line survey.

The web address for the survey is : http://kramer.gborocollege.edu/phpsurveyor/index.php?sid=3

Purpose:

The purpose of this investigation is to examine the perceptions of athletic training faculty as they relate to the stresses and strains in CAAHEP accredited entry-level programs and NATA accredited post-certification graduate athletic training education programs.

Subjects:

Full-time members of the instructional faculty affiliated with CAAHEP accredited athletic training education programs or NATA accredited graduate programs are being contacted and asked to participate in this research study.

In order to qualify as a potential subject, you:

a. Must be certified by the NATABOC for at least 1 year,

b. Must be currently serving as an instructional staff member in a CAAHEP accredited athletic training education program or NATA accredited post-certification graduate athletic training education program,

c. Must have instructed at least one athletic training education related classroom course within the previous academic year or supervised two entry-level athletic training students during a clinical education course or field work assignment during the previous academic year,

d. Must have a reliable access and be capable of using the Internet, a web browser, and an e-mail server.

Procedures

Members of the NATA that indicated in their membership profile working in the College/University setting with either an academic/research faculty or dual appointment position are being contacted as potential subjects.

Potential subjects are being contacted via e-mail and letter, and asked to participate in this electronic survey research study.

If you are interested in participating, please go to the following web address:

http://kramer.gborocollege.edu/phpsurveyor/index.php?sid=3

You may either 'click' on the link above, or cut and past the above URL into the address box of a web browser.

The survey is based on the Role Strain Scale (Mobily 1991), a paper and pencil instrument. You will be asked to complete a series of five questionnaires: a personal demographics questionnaire, an institutional questionnaire, an academic role orientation questionnaire, the Role Strain Scale- Athletic Training Educator version, and an intent to leave questionnaire.

Length of Commitment

The length of commitment for this investigation is less than 30 minutes. To protect confidentiality, subjects will be asked to select a unique username/ID to be used during data coding. No other personal identifying information will be collected. All publications generated as a result of this investigation will refer to data in the aggregate and no individual results will be revealed.

If you are interested in participating but have further questions, please contact me by email at charlesr@gborocollege.edu or by phone at 336-272-7102. Also, please contact me via e-mail or by phone if you have difficulty accessing or completing the on-line survey instrument.

Thank you in advance for completing the on-line survey.

Sincerely,

BC Charles-Liscombe, MS, ATC-L
Clinical Coordinator for Athletic Training,
Greensboro College

Doctoral Student,
Department of Exercise and Sport Science,
University of North Carolina at Greensboro

(GROUND MAIL SOLICITATION)

Dear Athletic Training Educator,

I recently contacted you by e-mail requesting your participation in a study examining academic role strain among athletic training educators. This letter is a brief reminder to consider participating in this on-line research study.

If you are interested in participating, please go to the following web address:

http://kramer.gborocollege.edu/phpsurveyor/index.php?sid=3

If you would rather receive a written survey and return the survey by mail or fax, please contact me by phone at 336-272-7102 or by e-mail at charlesr@gborocollege.edu and I will send one to you.

Thank you in advance for participating in this survey. Your input is valuable and essential for the successful completion of this research.

Sincerely,

BC Charles-Liscombe, MS, ATC, LAT
Clinical Coordinator of Athletic Training
Greensboro College

Doctoral Student
Department of Exercise and Sport Science
University of North Carolina, Greensboro

(**FINAL E-MAIL REMINDER)**

Dear Athletic Training Educator,

If you have already submitted your response to the assessment of academic role strain, thank you and disregard this final notice.

Those of you who have not yet replied, please consider taking the time to complete the on-line assessment of academic role strain. As a profession, athletic training educators have unique responsibilities. This study is intended to provide insight into the most common, most stressful causes of academic role strain. Your input is needed to determine the challenges and issues facing entry-level and graduate level athletic training educators in the United States.

If you have not already done so, please go to:

http://kramer.gborocollege.edu/phpsurveyor/index.php?sid=3

and complete the survey.

Data collection for this investigation will end on April 18th, 2006

Thank you for your time, consideration, and patience.

Sincerely,

BC Charles-Liscombe, ATC
Clinical Coordinator of Athletic Training
Greensboro College

Doctoral Student,
Department of Exercise and Sport Studies
University of North Carolina, Greensboro

APPENDIX C :
PRINT VERSION OF THE ON-LINE SURVEY INSTRUMENT

Academic Role Strain

This survey is intended to assess athletic training faculty members perceived and experienced strain in their respective academic settings.

Part Ia - Personal and Employment Demographic Questionnaire

This portion of the survey is intended to collect personal demographic information related to you, your current faculty status and your administrative responsibilities. *

Ia: Please create a username of at least 8 characters that combines numbers and letters. This username will be used for data collection and coding purposes only.

In order to protect your identity and confidentiality, you are being asked to create a unique personal identifying username.

Please write your answer here:

---

* **Ia1: Are you currently employed as a faculty member at an institution accredited by CAAHEP to offer an entry-level athletic training education program?** Please choose **only one** of the following:

- ☐ Yes
- ☐ No

Ib: Age Please write your answer here:

Ib1: What year were you certified by the BOC? Please write your answer here:

Ib2: By what route were you eligible to sit for the BOC certification examination? Please choose **only one** of the following:

- ☐ Curriculum/Accredited Program
- ☐ Internship

Ic: Gender Please choose **only one** of the following:

- ☐ Female
- ☐ Male

Id: What is your current marital status? Please choose **only one** of the following:

- ☐ Single
- ☐ Married/Living with Partner
- ☐ Divorced
- ☐ Widowed
- ☐ Other

Ie: How many children and/or dependents do you currently have? Please do not include spouses or partners. Please choose **only one** of the following:

- ☐ None
- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four or more

[Only answer this question if you answered 'One ' or 'Two' or 'Three' or 'Four or more' to question 'Ie '] **Ie1: How many of your children or dependents are currently living at home with you.** Please choose **only one** of the following:

- ☐ None
- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four or more

If: Do you have a full-time faculty appointment at your institution?

If you are classified as an adjunct faculty member, part-time faculty member, or a non-voting member of your institution's faculty, please indicate no.

Please choose **only one** of the following:

- ☐ Yes
- ☐ No

If1: Please indicate the number of years you have been employed at your current institution? Please choose **only one** of the following:

- ☐ 0 to 4 years
- ☐ 5 to 9 years
- ☐ 10 to 14 years
- ☐ 15 to 19 years
- ☐ 20 or more years

IF2: Please indicated the total number of years you have been employed full-time in athletic training education? Please choose **only one** of the following:

- ☐ 0 to 4 years
- ☐ 5 to 9 years
- ☐ 10 to 14 years
- ☐ 15 to 19 years
- ☐ 20 or more years

Ig: What is your current faculty rank? Please choose **only one** of the following:

- ☐ Professor
- ☐ Associate Professor
- ☐ Assistant Professor
- ☐ Instructor/Lecturer
- ☐ Adjunct
- ☐ Other _____

Ih: What is your current tenure status? Please choose **only one** of the following:

- ☐ Tenured
- ☐ Tenure Track/Not Yet Tenured
- ☐ Continuing/Renewable Contract
- ☐ Term-Limited/Non-renewable Contract
- ☐ Non-Contract
- ☐ Other _____

[Only answer this question if you answered 'Tenure Track/Not Yet Tenured' to question 'Ih '] **Ih1: When will you be evaluated for tenure?** Please choose **only one** of the following:

- ☐ 1 year
- ☐ 2 years
- ☐ 3 years
- ☐ 4 years
- ☐ 5 years
- ☐ 6 years

[Only answer this question if you answered 'Continuing/Renewable Contract' or 'Term-Limited/Non-renewable Contract' or 'Tenure Track/Not Yet Tenured' to question 'Ih '] **Ih2: How long is your current contract?** Please choose **only one** of the following:

- ☐ 1 year
- ☐ 2 years
- ☐ 3 years
- ☐ 4 years
- ☐ 5 years
- ☐ 6 years
- ☐ Other

[Only answer this question if you answered 'Tenured' to question 'Ih '] **Ih3: When will you be evaluated for post-tenure review?** Please choose **only one** of the following:

- ☐ 3 years
- ☐ 4 years
- ☐ 5 years
- ☐ For cause only
- ☐ For promotion only
- ☐ There is no post-tenure review at my institution
- ☐ Other

Ii: Please indicate any current administrative titles or positions that you hold at your institution. Please choose **all** that apply:

- ☐ AT Education Program Director
- ☐ Clinical Coordinator
- ☐ Head Athletic Trainer
- ☐ Assistant Athletic Trainer
- ☐ Department Chair
- ☐ Athletic Director

Other: ☐

Ij: Are you a member of a collective bargaining agreement or union at your institution? Please choose **only one** of the following:

- ☐ Yes
- ☐ No
- ☐ Not eligible

Ij1: How many credit hours do you TEACH per academic year?

The academic year traditionally includes the Fall and Spring semesters and a winter term if applicable. Please include summer school teaching loads if mandated by your position/program.

If your institution uses credit units (1 course = 1 course unit) please use the Other box and explain. If your institution utilizes quarters instead of semesters, please use the Other box and describe your teaching load.

Please choose **only one** of the following:

- ☐ None
- ☐ 1 to 5 credit hours per year
- ☐ 6 to 10 credit hours per year
- ☐ 11 to 15 credit hours per year
- ☐ 16 to 20 credit hours per year
- ☐ 21 to 25 credit hours per year
- ☐ 26 or more credit hours per year
- ☐ Other ☐

Ij2: How many credit hours does the average full-time faculty member in your department TEACH per academic year?

The academic year traditionally includes the Fall and Spring semesters and a winter term if applicable. Please include summer school teaching loads if mandated by the department.

If your institution uses credit units (1 course = 1 course unit) please use the Other box and explain. If your institution utilizes quarters instead of semesters, please use the Other box and describe your teaching load.

Please choose **only one** of the following:

- ☐ None
- ☐ 1 to 5 credit hours per year
- ☐ 6 to 10 credit hours per year
- ☐ 11 to 15 credit hours per year
- ☐ 16 to 20 credit hours per year
- ☐ 21 to 25 credit hours per year
- ☐ 26 or more credit hours per year
- ☐ Other

Part Ib - Educational Background

This portion of the survey is intended to collect personal demographic information related to your educational preparation and workload. * **Ik: What is your highest degree completed?** Please choose **only one** of the following:

- ☐ Doctorate
- ☐ Master's
- ☐ Bachelor's

[Only answer this question if you answered 'Doctorate' to question 'Ik '] **Ik1: What degree did you earn in your doctoral program?** Please choose **only one** of the following:

- ☐ Ph.D.
- ☐ Ed.D.
- ☐ Other

[Only answer this question if you answered 'Doctorate' to question 'Ik '] **IK2: What was your major area of study in your doctoral program** Please write your answer here:

[Only answer this question if you answered 'Doctorate' to question 'Ik '] **Ik3: What year did you complete your doctorate?** Please write your answer here:

[Only answer this question if you answered 'Doctorate' to question 'Ik '] **IK4: While you were completing your doctoral program, please indicate your responsibilities and activities associated with your program.** Please choose **all** that apply:

- ☐ Research Assistantship
- ☐ Teaching Assistantship
- ☐ Clinical Assistantship
- ☐ Other Full-time employment
- ☐ Other responsibilities including part-time employment outside of the institution

Other:

[Only answer this question if you answered 'Master's' to question 'Ik '] **Ik5: Are you currently enrolled in a doctoral program while working full-time as a faculty member?** Please choose **only one** of the following:

- ☐ Yes
- ☐ No

[Only answer this question if you answered 'Yes' to question 'Ik5 '] **IK5a: While you are completing your doctoral program, please indicate your current responsibilities.** Please choose **only one** of the following:

- ☐ Full-time employment at another institution
- ☐ Full-time employment at the same institution
- ☐ Other

[Only answer this question if you answered 'Yes' to question 'Ik5 '] **IK5b: What degree are your working towards in your doctoral program?** Please choose **only one** of the following:

- ☐ Ph.D.
- ☐ Ed.D.
- ☐ Other

[Only answer this question if you answered 'Yes' to question 'Ik5 '] **Ik5c: What is your major area of study in your doctoral program** Please write your answer here:

[Only answer this question if you answered 'Master's' or 'Doctorate' to question 'Ik ']
IK6: What degree did you earn in your Master's program? Please choose **only one** of the following:

- ☐ Master of Science
- ☐ Master of Arts
- ☐ Master of Education
- ☐ Master of Athletic Training
- ☐ Master of Physical Therapy
- ☐ Other

[Only answer this question if you answered 'Master's' or 'Doctorate' to question 'Ik ']
IK7: What was your major area of study in your Master's program Please write your answer here:

[Only answer this question if you answered 'Master's' or 'Doctorate' to question 'Ik ']
IK8: What year did you complete your Master's degree? Please write your answer here:

[Only answer this question if you answered 'Doctorate' or 'Master's' to question 'Ik ']
IK9: While you were completing your Master's degree program, please indicate your responsibilities and activities associated with your program Please choose **all** that apply:

- ☐ Research Assistantship
- ☐ Teaching Assistantship
- ☐ Clinical Assistantship
- ☐ Other Full-time employment
- ☐ Other responsibilities including part-time employment outside of the institution

Other:

Part II - Institutional Demographic Information

This portion of the survey is intended to collect information related to your institutional and departmental characteristics, resources, and affiliations. **IIb: Please identify the department or division in which Athletic Training Education Program (ATEP) is located:** Please write your answer here:

IIb1: Please indicate the School or College in which the ATEP is located.

If your institution does not assign schools or colleges, please indicate Not Applicable

Please write your answer here:

IIc: Please indicate the degree(s) offered within the Department/Division: Please choose **all** that apply:

- ☐ Bachelors degree
- ☐ Master's degree
- ☐ Doctorate Degree
- ☐ Other

Other:

IIc1: Please indicate the degree(s) offered within the Athletic Training Education Program. Please choose **all** that apply:

- ☐ Bachelors of Science
- ☐ Bachelors of Arts
- ☐ Entry-Level Masters
- ☐ Post-certification Graduate Education Program
- ☐ Ph.D., Ed.D., or other doctoral degree

Other:

IIe1:

Please indicate your institution's Basic Classification according to the Carnegie Foundation for the Advancement of Teaching.

Note the Classification System was changed in February 2006. The classification system may seem unfamiliar to you. Please verify your classification using the website located below.

If you are unsure of your classification, please use the Institution Lookup feature available at the Carnegie Foundation website or insert the following URL into a separate internet browser window:

http://www.carnegieclassification-preview.org/

The Basic Classification is the last item listed below the classification and category bar.

Please choose **only one** of the following:

- ☐ Doctorate-granting University - Very High Research Activity
- ☐ Doctorate-granting University - High Research Activity
- ☐ Doctoral/Research Universities
- ☐ Master's Colleges and Universities (Larger programs)
- ☐ Master's Colleges and Universities (Medium programs
- ☐ Master's Colleges and Universities (Smaller programs)
- ☐ Baccalaureate Colleges -Arts & Sciences
- ☐ Baccalaureate Colleges -Diverse Fields
- ☐ Baccalaureate/Associate's Colleges
- ☐ Special Focus Institution

IIf: Please indicate your institutional affiliation and/or funding source Please choose **only one** of the following:

- ☐ Public Institution
- ☐ Private Institution

IIg: Please indicate your institution's athletic affiliation. Please choose **only one** of the following:

- ☐ NCAA I - A
- ☐ NCAA I -AA
- ☐ NCAA I-AAA
- ☐ NCAA II
- ☐ NCAA III
- ☐ NAIA
- ☐ Not applicable
- ☐ Other

IIg1: Please indicate the total number of intercollegiate sports provided athletic training services on your campus. Please write your answer here:

IIG2: Please indicate the total number of intramural and/or club sports provided athletic training services on your campus. Please write your answer here:

IIh: What year was the Athletic Training Education Program initially approved (NATA) or accredited (CAAHEP)? Please write your answer here:

IIi: When will you be required to undergo review for re-accreditation? Please choose **only one** of the following:

- ☐ Currently under review
- ☐ 2006 - 2007
- ☐ 2007 - 2008
- ☐ 2008- 2009
- ☐ 2009 - 2010
- ☐ 2010 - 2011
- ☐ after 2011
- ☐ Not sure

IIj1: Please indicate the number of certified athletic trainers at your institution with full-time faculty status. Please write your answer here:

IIj2: Please indicate the number of certified athletic trainers at your institution with part-time/adjunct faculty status. Please write your answer here:

IIj3: Please indicate the number of full-time certified athletic trainers at your institution without faculty rank who serve as Approved Clinical Instructors (ACIs).

Please do not include graduate assistant athletic trainers.

Please write your answer here:

IIJ3a: Please indicate the number of graduate assistant, part-time, and/or intern certified athletic trainers at your institution without faculty rank who serve as Approved Clinical Instructors (ACIs).

Please do not include full-time assistants or ACIs with faculty rank.

Please write your answer here:

IIj4: Please indicate the number of off-campus ACI's without faculty rank.
Please write your answer here:

IIj5: Please indicate the total number of Affiliated Clinical Sites utilized by your ATEP Please write your answer here:

IIj6: Please indicate the current number of students formally admitted/enrolled in the entry-level athletic training education program.
Please write your answer here:

Part III - Academic Role Orientation

The following typology of academic role orientation was constructed by emphasizing or de-emphasizing each of the three primary roles of teaching, research, and service.

For the purposes of this scale, please note the following:

- TEACHING includes all classroom, laboratory, and clinical education instructional activities, academic advising, and supervision of student internships, and independent studies;
- RESEARCH includes all scholarly endeavors; and
- SERVICE includes service to the college or university, departmental administration, clinical practice providing athletic training service to clients/patients, service to the community, and service to the profession.

BEFORE RESPONDING to the questions that follow, please study carefully the typology below.

Type	Academic Role Orientation	Description
I	**TEACHING** - research - service	Teaching is prime commitment; research and service are less important
II	teaching - **RESEARCH** - service	Research is a prime commitment; teaching and service are less important.
III	teaching - research - **SERVICE**	Service is a prime commitment; teaching and research are less important.
IV	**TEACHING - RESEARCH** - service	Both teaching and research are significant and have equal importance; service is less important.
V	**TEACHING** - research - **SERVICE**	Both teaching and service are significant and have equal importance; research is less important.
VI	teaching **- RESEARCH - SERVICE**	Both research and service are significant and have equal importance; teaching is less important.
VII	**TEACHING - RESEARCH - SERVICE**	Extensive and equal commitment in all three areas.
VIII	teaching - research - service	Minimal commitment in all three areas.

Part III -Academic Role Orientation (continued)

IIIa: Which orientation best represents how you would ideally like to spend your time working? Please choose **only one** of the following:

- ☐ Type I: TEACHING ◆ research ◆ service
- ☐ Type 2: teaching ◆ RESEARCH ◆ service
- ☐ Type 3: teaching ◆ research ◆ SERVICE
- ☐ Type 4: TEACHING ◆ RESEARCH ◆ service
- ☐ Type 5: TEACHING ◆ research ◆ SERVICE
- ☐ Type 6: teaching ◆ RESEARCH ◆ SERVICE
- ☐ Type 7: TEACHING ◆ RESEARCH ◆ SERVICE
- ☐ Type 8: teaching ◆ research ◆ service

IIIb: Which orientation best represents how you actually spend your time working? Please choose **only one** of the following:

- ☐ Type I: TEACHING ◆ research ◆ service
- ☐ Type 2: teaching ◆ RESEARCH ◆ service
- ☐ Type 3: teaching ◆ research ◆ SERVICE
- ☐ Type 4: TEACHING ◆ RESEARCH ◆ service
- ☐ Type 5: TEACHING ◆ research ◆ SERVICE
- ☐ Type 6: teaching ◆ RESEARCH ◆ SERVICE
- ☐ Type 7: TEACHING ◆ RESEARCH ◆ SERVICE
- ☐ Type 8: teaching ◆ research ◆ service

IIIc: In your judgment, which orientation is the most appropriate for the academic mission and goals of your institution? Please choose **only one** of the following:

- ☐ Type I: TEACHING • research • service
- ☐ Type 2: teaching • RESEARCH • service
- ☐ Type 3: teaching • research • SERVICE
- ☐ Type 4: TEACHING • RESEARCH • service
- ☐ Type 5: TEACHING • research • SERVICE
- ☐ Type 6: teaching • RESEARCH • SERVICE
- ☐ Type 7: TEACHING • RESEARCH • SERVICE
- ☐ Type 8: teaching • research • service

IIId: In your judgment, which orientation is the most appropriate for athletic training and athletic training education? Please choose **only one** of the following:

- ☐ Type I: TEACHING • research • service
- ☐ Type 2: teaching • RESEARCH • service
- ☐ Type 3: teaching • research • SERVICE
- ☐ Type 4: TEACHING • RESEARCH • service
- ☐ Type 5: TEACHING • research • SERVICE
- ☐ Type 6: teaching • RESEARCH • SERVICE
- ☐ Type 7: TEACHING • RESEARCH • SERVICE
- ☐ Type 8: teaching • research • service

III e: Which orientation does your supervisor promote / encourage for you?
Please choose **only one** of the following:

- ☐ Type I: TEACHING → research → service
- ☐ Type 2: teaching → RESEARCH → service
- ☐ Type 3: teaching → research → SERVICE
- ☐ Type 4: TEACHING → RESEARCH → service
- ☐ Type 5: TEACHING → research → SERVICE
- ☐ Type 6: teaching → RESEARCH → SERVICE
- ☐ Type 7: TEACHING → RESEARCH → SERVICE
- ☐ Type 8: teaching → research → service

III f: Which orientation best describes the norms / values of the majority of your colleagues? Please choose **only one** of the following:

- ☐ Type I: TEACHING → research → service
- ☐ Type 2: teaching → RESEARCH → service
- ☐ Type 3: teaching → research → SERVICE
- ☐ Type 4: TEACHING → RESEARCH → service
- ☐ Type 5: TEACHING → research → SERVICE
- ☐ Type 6: teaching → RESEARCH → SERVICE
- ☐ Type 7: TEACHING → RESEARCH → SERVICE
- ☐ Type 8: teaching → research → service

IIIg: Which orientation best describes the <u>colleague(s) whom you most respect and/or who serve as your role model(s)</u>? <u>Please choose **only one** of the following:</u>

- ☐ Type I: TEACHING • research • service
- ☐ Type 2: teaching • RESEARCH • service
- ☐ Type 3: teaching • research • SERVICE
- ☐ Type 4: TEACHING • RESEARCH • service
- ☐ Type 5: TEACHING • research • SERVICE
- ☐ Type 6: teaching • RESEARCH • SERVICE
- ☐ Type 7: TEACHING • RESEARCH • SERVICE
- ☐ Type 8: teaching • research • service

Part IIIa - Academic Role Orientation (continued)

The next series of questions are intended to assess the percentage of time that you ***actually*** spend or that you would ***ideally*** like to spend in each work related area.

For the purposes of this investigation:

- **Teaching** is classified as all activities related to classroom and laboratory instruction, clinical education, and advising.
- **Service** is classified as all activities related to institutional, departmental, and professional committee work and/or leadership offices.
- **Departmental Administration** is classified as all activities related to program direction, supervision, clinical coordination, budgeting, scheduling, and recruitment.
- **Clinical practice** is classified as all activities related to athletic training services for the sole purpose of providing healthcare for patients.
- **Travel** is the time spent off-campus attending, reviewing, and/or providing care at off-campus athletic facilities, affiliated clinical sites, and away competitions.

IIIh1: What percentage of your time is *ACTUALLY* spent in each of the following areas?

Please indicate the percentage of time in the comment box beside each area. The sum of the comment boxes should equal 100%.

Please choose all that apply and provide a comment:

☐ Teaching	
☐ Research	
☐ Service	
☐ Departmental Administration	
☐ Clinical Practice	
☐ Travel	

IIIh2: What percentage of your time would you *IDEALLY* like to spend in each of the following areas?

Please indicate the percentage of time in the comments box beside each area. The boxes should equal 100%

Please choose all that apply and provide a comment:

☐ Teaching	
☐ Research	
☐ Service	
☐ Departmental Administration	
☐ Clinical Practice	
☐ Travel	

IIIH3: Please estimate the total number of hours during a typical week that you spend on all work-related activities. Please write your answer here:

Part IVa - Assessment of Role Strain

The following work-related situations have been identified in the higher education literatures as possible sources of faculty stress.

Please mark the descriptor that most accurately represents the frequency with which you have experienced stress from each item.

At the end of the instrument you will have the opportunity to add additional stressors.

RSS_1: Coping with the number of expectations of my job Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_2: Thinking that the amount of work I have to do interferes with how well it gets done Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_3: Coping with the complexity of my job expectations Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_4: Having job demands interfere with other activities of personal importance (family, leisure, other interests) Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_5: Having adequate resources (i.e. secretarial support, libraries, computer access, classrooms, laboratory equipment, clinical sites) to meet role expectations Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_6: Having adequate time to meet role expectations Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_7: Feeling torn between the demands of the profession and those of the institution. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_8: Dealing with program or curricular changes Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_9: Feeling pressured to secure outside funding in a time of limited availability Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSs_10: Feeling like I have too heavy a workload; one that cannot possibility be finished during the normal work week. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_11: Receiving insufficient recognition for my teaching performance

Please indicate the frequency with which you experience stress from this item

Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_12: Receiving insufficient recognition for my clinical expertise

Please indicate the frequency with which you experience stress from this item

Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_13: Receiving insufficient recognition for my research and publications
Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_14: Receiving insufficient recognition for service activities Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS_15: Feeling unable to satisfy the conflicting demands of my various work-related constituencies (i.e. administration, colleagues, students, clinical agencies, funding agencies, athletic departments, and patients)
Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

Part IVb - Assessment of Role Strain (continued)

The following work-related situations have been identified in the higher education literatures as possible sources of faculty stress.

Please mark the descriptor that most accurately represents the frequency with which you have experienced stress from each item.

At the end of the instrument you will have the opportunity to add additional stressors.

RSS-16: Feeling that clinical practice expectations take time away from my research and publication expectations. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-17: Feeling pressured to maintain clinical competence or a clinical practice without the time to realistically do so Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-18: Feeling pressure for better job performance over and above what I believe is reasonable Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-19: Having to participate in work-related activities outside regular working hours in order to meet job expectations Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-20: Feeling that my progress on the job is not what it could or should be Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-21: Coping with changing faculty role expectations Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-22: Having a lack of clearly defined qualitative expectations of the faculty role Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-23: Having a lack of clearly defined quantitative expectations of the faculty role Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-24: Feeling pressured to do more work than I currently am Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-25: Feeling that the goals and values of the institution/department are incongruent with personal goals and values Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-26: Feeling that I was hired primarily to teach but I am evaluated on the basis of other role expectations Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-27: Feeling that research and publication expectations take time needed for my teaching responsibilities Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-28: Feeling that teaching expectations take time needed for my research and publication activities Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-29: Feeling that administration and service (not including clinical practice) expectations take time away from my other role expectations Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-30: Feeling that clinical practice expectations take time away from my teaching responsibilities. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-31: Feeling that clinical practice expectations take time away from my research and publication expectations. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-32: Feeling that clinical practice expectations take time away from my administrative and service responsibilities. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-33: Feeling that administrative expectations take time away from my research responsibilities. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-34: Feeling physically drained from my work at the end of the day Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-35: Feeling emotionally drained from my work at the end of the day Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

Part IVc - Assessment of Role Strain (continued)

The following work-related situations have been identified in the higher education literatures as possible sources of faculty stress.

Please mark the descriptor that most accurately represents the frequency with which you have experienced stress from each item.

At the end of the instrument you will have the opportunity to add additional stressors.

RSS-36: Feeling uncertain as to what administration thinks of me Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-37: Feeling that there is a lack of consensus among faculty on the expectations of the faculty role Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-38: Feeling that there is a lack of consensus between faculty and administration on the expectations of the faculty role Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-39: Feeling that my current level of scholarly productivity is incongruent with my supervisor's expectations. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-40: Feeling that my current level of scholarly productivity is incongruent with my departmental colleagues' expectations. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-41: Feeling that I do not have sufficient knowledge and skills to do research Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-42: Feeling that I have not kept abreast of current developments in my field Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-43: Having to teach subject matter or courses which are incongruent with my background or expertise Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-44: Feeling that I do not have sufficient skills to be an effective teacher Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-45: Being concerned that I do not have sufficient clinical expertise Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-46: Being concerned that I do not have sufficient skills to remain current with regards to technology. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-47: Being concerned that I do not have access to adequate technology. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-48: Receiving insufficient information on my performance with respect to promotion and/or tenure Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-49: Receiving insufficient information on my performance with respect to salary considerations Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-50: Dealing with unsystematic evaluation practices Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-51: Dealing with students who are inadequately prepared or poorly motivated Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-52: Feeling that the quality of the student applicant pool and demands for maintaining enrollment are in conflict with professional standards Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-53: Feeling that I am not respected by my various constituencies Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-54: Feeling that my salary does not reflect my current level of performance. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

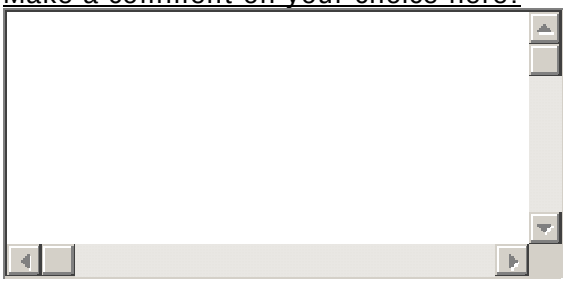
RSS-55: Feeling that my current level of scholarly productivity is incongruent with institutional expectations. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

RSS-56: Please feel free to add other sources of work-related stress and indicate the extent to which you are bothered by them Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

Make a comment on your choice here:



Part IVd - Intent to Leave

This section of the survey is intended to assess your desire and/or intent to leave athletic training, education in general, and/or your institution.

Please mark the descriptor that most accurately represents the frequency with which you have felt each item.

ITL1: Feeling that I want to leave my current institution, but remain employed in athletic training education. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

ITL2: Feeling that I want to leave athletic training education, but remain in or return to athletic training clinical practice. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

ITL3: Feeling that I want to leave athletic training clinical practice, but remain in athletic training education. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time
- ☐ Not Applicable

ITL4: Feeling that I want to leave athletic training education, but remain in higher education in another capacity. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

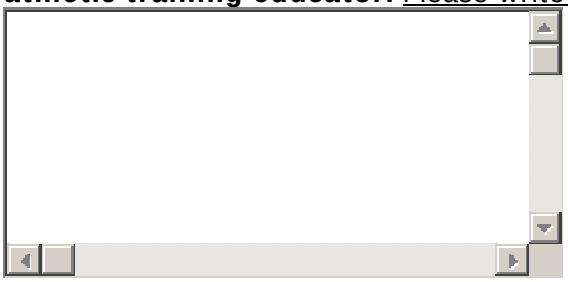
ITL5: Feeling that I want to leave BOTH athletic training and higher education to pursue other employment opportunities. Please choose **only one** of the following:

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Frequently
- ☐ Nearly All the Time

Part V - Summary

This section of the survey is intended to solicit your input on the MOST STRESSFUL issues facing athletic training educators and to identify potential SUGGESTIONS for change.

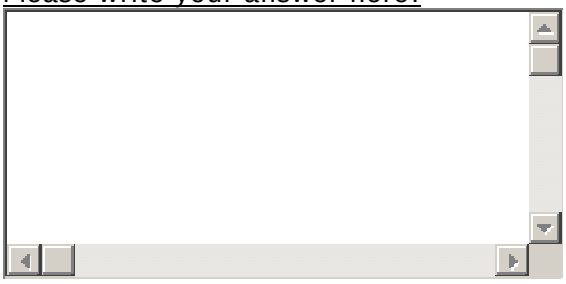
Sum1: Please list in order the 5 most frequent stressor(s) in your role as an athletic training educator. Please write your answer here:



Sum2: What suggestions or strategies would you offer to other athletic training faculty members to minimize work-related stress?

What changes in your work environment would minimize your stress level?

Please write your answer here:



Part VI - Thank You

I want to thank you for completing the Academic Role Strain Assessment for Athletic Training Educators. Your participation is vital to the completion of this research and a greater understanding of the stresses affecting athletic training educators, such as you.

Submit Your Survey.

Thank you for completing this survey. Please fax your completed survey to: 1-336-217-7237.

APPENDIX D
ADDITIONAL RESULTS TABLES

Table 1.

Comprehensive List of Schools Reported by Respondents.

Allied Health	Health and Human Services
Allied Health and Nursing	Health and Life Sciences
Allied Health and Sport Science	Health and Public Affairs
Allied Health Sciences	Health and Rehabilitation Sciences
Allied Medical Professions	Health Professions
Applied Arts	Health Science and Human Performance
Applied Health and Educational Psychology	Health Science and Human Services
Applied Life Studies	Health Sciences
Applied Science and Technology	Health Technology and Management
Applied Sciences	Health, Environment and Sciences
Applied Sciences and Arts	Health, Physical Education, and Leisure Services
Applied Technology	HPER
Arts and Sciences	Human Environmental Sciences
Behavioral and Applied Sciences	Human Performance and Leisure Science
Business Administration	Human Potential and Performance
Education	Integrated Science and Technology
Education and Allied Health Sciences	Liberal Arts
Education and Behavioral Sciences	Liberal Arts and Sciences
Education and Health Sciences	Medicine and Health Sciences
Education and Human Sciences	Natural and Behavioral Science
Education and Human Services	Natural Sciences
Education and Professional Studies	Natural Sciences and Mathematics
Education, Health, and Human Services	Nursing and Health Professions
Education, Social Work, and Professional Studies	Nursing, College of Business Administration
Education/Math and Science (joint location)	Physical Education
Exercise Science	Professional Studies
Graduate Medical Education	Public Health and Health Professions
Health	Science
Health and Behavioral Sciences	Science and Health
Health and Human Development	Science and Humanities
Health and Human Performance	Science and Math
Health and Human Sciences	Social Sciences
	Sports Science

Table 2.

Comprehensive List of Departments Reported by Respondents

Allied Health	Health Science and Sport Studies
Applied Physiology and Kinesiology	Health Sciences
Arts and Science	Health Sciences and Kinesiology
Athletic Training	Health Sciences and Sports Studies
Athletic Training/Physical Therapy	Health, Exercise Science, and Athletics
Biokinetics	Health, Exercise Science, and Secondary Education
Biological Sciences	Health, Human Performance, and Athletics
Biology	Health, Human Performance, and Recreation
Biology/ Math & Sciences Education	Health, Kinesiology, Recreation, and Sports Studies
Education and Applied Arts	Health, PE, AT, and Sports Management
Educational Leadership and Counseling Psychology	Health, Physical Education, and Exercise Science
Exercise and Movement Sciences	Health, Physical Education, Sport, and Exercise Science
Exercise and Nutrition Science	Health, Recreation, and Kinesiology
Exercise and Rehabilitative Sciences	Health, Recreation, and PE
Exercise and Sport Science(s)	Health, Sport and Exercise Science
Exercise and Sports Performance	Healthful Living and Sports Studies
Exercise Sciences	HPER
Exercise Science and Sport Studies	HPERD
Exercise Science, Health Promotion, & Recreation	HPES
Family Medicine	Human Movement Sciences
Health and Applied Human Sciences	Human Performance
Health and Exercise Science	Human Performance and Sport Management
Health and Exercise Sciences	Kinesiology
Health and Human Performance	Kinesiology and Athletics
Health and Kinesiology	Kinesiology and Community Health
Health and Movement Science	Kinesiology and Health Education
Health and Physical Education	Kinesiology and Health Science
Health and Sports Science	
Health Professions	
Health Promotion	
Health Promotion and Human Performance	
Health Science	

Table 2.

Comprehensive List of Departments Reported by Respondents (continued)

Kinesiology and Health Studies	Physical Education and Sport
Kinesiology and Physical Education	Physical Education and Sport Studies
Kinesiology and Recreation	Physical Education, Wellness, and Sports Studies
Kinesiology, Health, and Human Development	Physical Therapy and Sports Science
Math/Science	Recreation Studies/Exercise Science
Movement and Sports Science	Recreation, PE, Athletics
Movement Science	Rehabilitation Sciences
Natural Sciences	Science of Human Performance
Physical Education	Sport and Exercise Sciences
Physical Education & Health Promotion	Sport Science
Physical Education & Recreation	Sport Sciences and Recreation
Physical Education & Sports Science	Sport, Fitness & Leisure Studies
Physical Education and Athletic Training	Sports Health Care
Physical Education and Exercise Studies	Sports Medicine
Physical Education and Recreation	Sports Medicine and Athletic Training
	Sports Medicine and Nutrition
	Sports Science

Table 3.

Rank Order of Role Strain Scale Items.

Instructions:
Please mark the descriptor that most accurately represents the frequency with which you have experienced stress from each item.
1 = Never, 2= Rarely, 3=Sometimes, 4=Frequently, 5=Nearly All the Time

Item	Descriptor	Subscale	Mean	SD
1	Coping with the number of expectations of my job	Overload	3.57	.94
6	Having adequate time to meet role expectations	Overload	3.47	.94
4	Having job demands interfere with other activities of personal importance (family, leisure, other interests)	Inter-Role Conflict	3.44	.97
51	Dealing with students who are inadequately prepared or poorly motivated	Intra-Sender RC	3.40	.90
35	Feeling emotionally drained from my work at the end of the day	Overload	3.26	1.02
2	Thinking that the amount of work I have to do interferes with how well it gets done	Overload	3.24	.95
15	Feeling unable to satisfy the conflicting demands of my various work-related constituencies (i.e. administration, colleagues, students, clinical agencies, funding agencies, athletic departments, and patients).	Inter-Sender RC	3.19	1.09

Table 3.

Rank Order of Role Strain Scale Questions (continued).

Item	Descriptor	Subscale	Mean	SD
34	Feeling physically drained from my work at the end of the day	Overload	3.18	.96
8	Dealing with program or curricular changes	Intra-Sender RC	3.15	.94
54	Feeling that my salary does not reflect my current level of performance.	Intra-Sender RC	3.15	1.28
10	Feeling like I have too heavy a workload; one that cannot possibility be finished during the normal work week.	Overload	3.04	1.16
52	Feeling that the quality of the student applicant pool and demands for maintaining enrollment are in conflict with professional standards	Intra-Sender RC	3.04	1.11
3	Coping with the complexity of my job expectations	Overload	2.98	1.02
5	Having adequate resources (i.e. secretarial support, libraries, computer access, classrooms, laboratory equipment, clinical sites) to meet role expectations	Intra-Sender	2.98	1.01
38	Feeling that there is a lack of consensus between faculty and administration on the expectations of the faculty role	Inter-Sender RC	2.95	1.06

Note: 1 = Never, 2= Rarely, 3=Sometimes, 4=Frequently, 5=Nearly All the Time

Table 3.

Rank Order of Role Strain Scale Questions (continued).

Item	Descriptor	Subscale	Mean	SD
19	Having to participate in work-related activities outside regular working hours in order to meet job expectations	Overload	2.94	1.11
37	Feeling that there is a lack of consensus among faculty on the expectations of the faculty role	Inter-Sender RC	2.93	1.13
29	Feeling that administration and service (not including clinical practice) expectations take time away from my other role expectations	Inter-Role Conflict	2.88	1.04
20	Feeling that my progress on the job is not what it could or should be	Incongruity	2.85	1.11
7	Feeling torn between the demands of the profession and those of the institution.	Incongruity	2.82	1.05
36	Feeling uncertain as to what administration thinks of me	Ambiguity	2.79	1.08
11	Receiving insufficient recognition for my teaching performance	Incongruity	2.71	1.14
24	Feeling pressured to do more work than I currently am	Overload	2.70	1.10
12	Receiving insufficient recognition for my clinical expertise	Incongruity	2.69	1.12

Note: 1 = Never, 2= Rarely, 3=Sometimes, 4=Frequently, 5=Nearly All the Time

Table 3.

Rank Order of Role Strain Scale Questions (continued).

Item	Descriptor	Subscale	Mean	SD
23	Having a lack of clearly defined quantitative expectations of the faculty role	Ambiguity	2.63	1.09
21	Coping with changing faculty role expectations	Ambiguity	2.62	.96
22	Having a lack of clearly defined qualitative expectations of the faculty role	Ambiguity	2.59	1.10
49	Receiving insufficient information on my performance with respect to salary considerations	Ambiguity	2.52	1.13
14	Receiving insufficient recognition for service activities	Incongruity	2.49	1.14
25	Feeling that the goals and values of the institution/department are incongruent with personal goals and values	Incongruity	2.47	1.11
17	Feeling pressured to maintain clinical competence or a clinical practice without the time to realistically do so	Intra-Sender RC	2.45	1.06
50	Dealing with unsystematic evaluation practices	Ambiguity	2.42	1.15
18	Feeling pressure for better job performance over and above what I believe is reasonable	Intra-Sender RC	2.41	1.06

Note: 1 = Never, 2= Rarely, 3=Sometimes, 4=Frequently, 5=Nearly All the Time

Table 3.

Rank Order of Role Strain Scale Questions (continued).

Item	Descriptor	Subscale	Mean	SD
42	Feeling that I have not kept abreast of current developments in my field	Incompetence	2.40	.98
41	Feeling that I do not have sufficient knowledge and skills to do research	Incompetence	2.37	1.08
30	Feeling that clinical practice expectations take time away from my teaching responsibilities.	Inter-Role Conflict	2.36	1.26
53	Feeling that I am not respected by my various constituencies	Inter-Sender RC	2.31	1.00
48	Receiving insufficient information on my performance with respect to promotion and/or tenure	Ambiguity	2.26	1.13
55	Feeling that my current level of scholarly productivity is incongruent with institutional expectations	Incongruity	2.20	1.12
32	Feeling that clinical practice expectations take time away from my administrative and service responsibilities	Inter-Role Conflict	2.18	1.12
39	Feeling that my current level of scholarly productivity is incongruent with my supervisor's expectations	Incongruity	2.17	1.12

Note: 1 = Never, 2= Rarely, 3=Sometimes, 4=Frequently, 5=Nearly All the Time

Table 3.

Rank Order of Role Strain Scale Questions (continued).

Item	Descriptor	Subscale	Mean	SD
40	Feeling that my current level of scholarly productivity is incongruent with my departmental colleagues' expectations	Incongruity	2.15	1.15
26	Feeling that I was hired primarily to teach but I am evaluated on the basis of other role expectations	Intra-Sender RC	2.12	1.17
47	Being concerned that I do not have access to adequate technology	Intra-Sender RC	2.11	.93
46	Being concerned that I do not have sufficient skills to remain current with regards to technology	Incompetence	2.04	.91
33	Feeling that administrative expectations take time away from my research responsibilities	Inter-Role Conflict	2.02	1.21
28	Feeling that teaching expectations take time needed for my research and publication activities	Inter-Role Conflict	2.01	1.19
43	Having to teach subject matter or courses which are incongruent with my background or expertise	Incompetence	1.99	.92

Note: 1 = Never, 2= Rarely, 3=Sometimes, 4=Frequently, 5=Nearly All the Time

Table 3.

Rank Order of Role Strain Scale Questions (continued).

Item	Descriptor	Subscale	Mean	SD
27	Feeling that research and publication expectations take time needed for my teaching responsibilities	Inter-Role Conflict	1.91	1.13
9	Feeling pressured to secure outside funding in a time of limited availability	Intra-Sender RC	1.87	1.04
45	Being concerned that I do not have sufficient clinical expertise	Incompetence	1.83	.82
44	Feeling that I do not have sufficient skills to be an effective teacher	Incompetence	1.79	.74
16	Feeling that clinical practice expectations take time away from my research and publication expectations	Inter-Role Conflict	1.76	1.04
13	Receiving insufficient recognition for my research and publications	Incongruity	1.65	.90
31	Feeling that clinical practice expectations take time away from my research and publication expectations	Inter-Role Conflict	1.64	1.03

Note: 1 = Never, 2= Rarely, 3=Sometimes, 4=Frequently, 5=Nearly All the Time

Table 4.

ANOVA Summary for Doctoral Enrollment Status on Total Role Strain and Subscale Scores.

Variable Source	SS	MS	F (2, 247)	p
Total Role Strain				
Between Groups	2.333	1.167	1.484	.229
Within Groups	194.167	.786		
Role Overload				
Between Groups	.110	.055	.091	.913
Within Groups	150.132	.608		
Inter-Role Conflict				
Between Groups	4.429	2.214	4.671	.010
Within Groups	117.107	.474		
Intra-Sender RC				
Between Groups	.245	.123	.412	.663
Within Groups	73.419	.297		
Role Incongruity				
Between Groups	2.037	1.018	1.848	.160
Within Groups	136.121	.551		
Inter-Sender RC				
Between Groups	.481	.240	.332	.718
Within Groups	178.734	.724		
Role Ambiguity				
Between Groups	2.698	1.349	1.751	.176
Within Groups	190.319	.771		
Role Incompetence				
Between Groups	1.966	.983	2.598	.076
Within Groups	93.437	.378		
Global Role Conflict				
Between Groups	1.104	.552	1.830	.163
Within Groups	74.506	.302		

Table 5.

ANOVA Summary for Marital Status on Total Role Strain and Subscale Scores.

Variable Source	SS	MS	F (2, 246)	P
Total Role Strain				
Between Groups	.659	.330	1.045	.353
Within Groups	77.630	.316		
Role Overload				
Between Groups	3.034	1.517	2.536	.081
Within Groups	147.147	.598		
Inter-Role Conflict				
Between Groups	.761	.380	.776	.462
Within Groups	120.692	.491		
Intra-Sender RC				
Between Groups	.336	.168	.564	.570
Within Groups	73.328	.298		
Role Incongruity				
Between Groups	.325	.162	.290	.749
Within Groups	137.764	.560		
Inter-Sender RC				
Between Groups	1.168	.584	.807	.447
Within Groups	178.009	.724		
Role Ambiguity				
Between Groups	.725	.362	.464	.629
Within Groups	192.209	.781		
Role Incompetence				
Between Groups	1.905	.953	2.523	.082
Within Groups	92.888	.378		
Global Role Conflict				
Between Groups	.697	.349	1.145	.320
Within Groups	74.913	.305		

Table 6.

ANOVA Summary for Route to BOC Certification on Total Role Strain and Subscale Scores.

Variable Source	SS	MS	F (1, 244)	P
Total Role Strain				
Between Groups	.000	.000	.001	.975
Within Groups	77.697	.318		
Role Overload				
Between Groups	.021	.021	.035	.852
Within Groups	147.940	.606		
Inter-Role Conflict				
Between Groups	.126	.126	.254	.615
Within Groups	121.028	.496		
Intra-Sender RC				
Between Groups	.089	.089	.300	.585
Within Groups	72.542	.297		
Role Incongruity				
Between Groups	.654	.654	1.167	.281
Within Groups	136.657	.560		
Inter-Sender RC				
Between Groups	.389	.389	.540	.463
Within Groups	175.994	.721		
Role Ambiguity				
Between Groups	.155	.155	.198	.657
Within Groups	190.513	.781		
Role Incompetence				
Between Groups	1.102	1.102	2.921	.089
Within Groups	92.021	.377		
Global Role Conflict				
Between Groups	.010	.010	.032	.859
Within Groups	74.967	.307		

Table 7.

ANOVA Summary for Parenting Role on Total Role Strain and Subscale Scores.

Variable Source	SS	MS	F (1, 248)	P
Total Role Strain				
Between Groups	1.157	1.157	1.469	.227
Within Groups	195.343	.788		
Role Overload				
Between Groups	3.137	3.137	5.289	.022
Within Groups	147.105	.593		
Inter-Role Conflict				
Between Groups	.309	.309	.632	.427
Within Groups	121.227	.489		
Intra-Sender Role Conflict				
Between Groups	.408	.408	1.380	.241
Within Groups	73.256	.295		
Role Incongruity				
Between Groups	.517	.517	.931	.336
Within Groups	137.641	.555		
Inter-Sender Role Conflict				
Between Groups	1.760	1.760	2.459	.118
Within Groups	177.455	.716		
Role Ambiguity				
Between Groups	1.178	1.178	1.523	.218
Within Groups	191.840	.774		
Role Incompetence				
Between Groups	.383	.383	1.001	.318
Within Groups	95.019	.383		
Global Role Conflict				
Between Groups	.592	.592	1.958	.163
Within Groups	75.018	.302		

Table 8.

ANOVA Summary for Tenure Status on Role Ambiguity

Source	df	SS	MS	F	p	η^2
Between Groups	4	9.48	2.37	3.113	0.016	0.049
Within Groups	240	182.63	0.77			

Table 9.

Means and Standard Deviations for Effects of Tenure Status on Role Ambiguity

Tenure Status	n	Mean	SD
Tenured	39	2.14	$0.71_{a, b}$
Tenure Track	66	2.57	0.83_{a}
Renewable/Continuing Contract	128	2.69	0.92_{b}
Non-contract	8	2.68	1.21
Non-renewable contract	4	2.93	0.59

Note: Subscripts indicate significant difference between groups, $p < 0.05$

Table 10.

ANOVA Summary for Number of Years at Current Institution on Total Role Strain and Subscale Scores

Variable Source	SS	MS	F (4, 245)	P
Total Role Strain				
Between Groups	1.570	.393	1.254	.289
Within Groups	76.727	.313		
Role Overload				
Between Groups	3.484	.871	1.454	.217
Within Groups	146.758	.599		
Inter-Role Conflict				
Between Groups	.719	.180	.364	.834
Within Groups	120.817	.493		
Intra-Sender Role Conflict				
Between Groups	1.052	.263	.887	.472
Within Groups	72.612	.296		
Role Incongruity				
Between Groups	3.427	.857	1.558	.186
Within Groups	134.731	.550		
Inter-Sender Role Conflict				
Between Groups	4.157	1.039	1.454	.217
Within Groups	175.058	.715		
Role Ambiguity				
Between Groups	6.015	1.504	1.970	.100
Within Groups	187.003	.763		
Role Incompetence				
Between Groups	.203	.051	.131	.971
Within Groups	95.199	.389		
Global Role Conflict				
Between Groups	.999	.250	.820	.514
Within Groups	74.612	.305		

Table 11.

ANOVA Summary for Clinical Appointment Status on Inter-Role Conflict.

Source	df	SS	MS	F	p	η^2
Between Groups	1	3.28	3.275	6.735	0.010	0.030
Within Groups	218	106.02	0.486			

Table 12.

ANOVA Summary for Faculty Rank on Role Ambiguity Subscale

Source	df	SS	MS	F	p	η^2
Between Groups	5	14.22	2.843	3.865	0.002	0.074
Within Groups	243	178.78	0.736			

Table 13.

Means and Standard Deviations for Effects of Faculty Rank on Role Ambiguity Subscale Scores

Rank	Mean	SD
Professor	2.01	$0.68_{a,b,c}$
Associate Professor	2.31	$0.76_{d,e}$
Assistant Professsor	2.56	$0.78_{a,f}$
Instructor/Lecturer	2.70	$0.98_{b,d}$
Other	3.13	$0.95_{c,e,f}$

Note: Subscripts indicate significant difference between groups
Note: Post Hoc comparisons a, d, and f, $p<.05$; b, c, and e, $p<.01$.

Table 14.

ANOVA Summary for Union Membership/Collective Bargaining on Total Role Strain and Subscale Scores

Variable Source	SS	MS	F (2, 232)	p
total Role Strain Score				
Between Groups	.074	.037	.122	.885
Within Groups	70.241	.303		
Role Overload				
Between Groups	.919	.460	.795	.453
Within Groups	134.206	.578		
Inter-Role Conflict				
Between Groups	1.987	.994	2.235	.109
Within Groups	103.163	.445		
Intra-Sender Role Conflict				
Between Groups	.122	.061	.214	.808
Within Groups	66.290	.286		
Role Incongruity				
Between Groups	.242	.121	.222	.801
Within Groups	126.229	.544		
Inter-Sender Role Conflict				
Between Groups	.470	.235	.331	.718
Within Groups	164.811	.710		
Role Ambiguity				
Between Groups	.788	.394	.522	.594
Within Groups	175.156	.755		
Role Incompetence				
Between Groups	.839	.420	1.098	.335
Within Groups	88.697	.382		
Global Role Conflict				
Between Groups	.295	.148	.515	.598
Within Groups	66.455	.286		

Table 15.

ANOVA Summary for Carnegie Classification on Total Role Strain and Subscale Scores.

Variable Source	SS	MS	F (3, 231)	p
Total Role Strain				
Between Groups	.407	.136	.445	.721
Within Groups	70.481	.305		
Role Overload				
Between Groups	.896	.299	.501	.682
Within Groups	137.871	.597		
Inter-Role Conflict				
Between Groups	.491	.164	.343	.794
Within Groups	110.113	.477		
Intra-Sender Role Conflict				
Between Groups	.110	.037	.127	.944
Within Groups	66.631	.288		
Role Incongruity				
Between Groups	2.702	.901	1.702	.167
Within Groups	122.270	.529		
Inter-Sender Role Conflict				
Between Groups	2.188	.729	1.021	.384
Within Groups	165.041	.714		
Role Ambiguity				
Between Groups	2.079	.693	.926	.429
Within Groups	172.982	.749		
Role Incompetence				
Between Groups	1.998	0.999	2.679	.071
Within Groups	86.143	.373		
Global Role Conflict				
Between Groups	.134	.045	.150	.929
Within Groups	68.771	.298		

Table 16.

Means, SD, and ANOVA for Effects of Funding Source on Academic Role Strain

	Public		Private		ANOVA	
Variable	M	SD	M	SD	F (1,248)	p
Total Role Strain	2.60	0.57	2.57	0.55	0.157	0.692
Role Ambiguity	2.58	0.88	2.57	0.90	0.006	0.938
Role Overload	3.15	0.83	3.07	0.71	0.590	0.443
Role Conflict (RC)	2.59	0.56	2.57	0.54	0.058	0.811
Inter-role RC	2.26	0.71	2.31	0.70	0.243	0.623
Intra-Sender RC	2.76	0.54	2.69	0.55	1.013	0.315
Inter-Sender RC	2.78	0.85	2.84	0.86	0.388	0.534
Role Incompetence	2.03	0.62	2.21	0.61	5.608	0.019
Role Incongruity	2.53	0.81	2.37	0.65	2.920	0.089

Note: Public, n=130, Private, n = 120

Table 17.

ANOVA Summary for Athletics Affiliation on Total Role Strain and Subscale Scores.

Variable Source	SS	MS	F (4, 217)	p
Total Role Strain				
Between Groups	1.80	0.45	1.424	0.227
Within Groups	68.60	0.32		
Role Overload				
Between Groups	3.74	0.93	1.521	0.197
Within Groups	133.33	0.61		
Inter-Role Conflict				
Between Groups	1.42	0.36	0.748	0.560
Within Groups	103.63	0.48		
Intra-Sender RC				
Between Groups	1.03	0.26	0.861	0.488
Within Groups	65.13	0.30		
Role Incongruity				
Between Groups	4.36	1.09	1.934	0.106
Within Groups	122.26	0.56		
Inter-Sender RC				
Between Groups	4.49	1.12	1.513	0.199
Within Groups	161.02	0.74		
Role Ambiguity				
Between Groups	1.06	0.27	0.329	0.858
Within Groups	175.00	0.38		
Role Incompetence				
Between Groups	1.80	0.45	1.167	0.326
Within Groups	83.40	0.38		

Table 18.

ANOVA Summary for Program Stability on Total Role Strain and Subscale Scores.

Variable Source	SS	MS	F (2, 230)	p
Total Role Strain				
Between Groups	0.43	0.22	0.690	0.503
Within Groups	71.79	3.12		
Role Overload				
Between Groups	0.47	0.24	0.384	0.682
Within Groups	141.83	0.617		
Role Conflict (RC)				
Between Groups	0.35	0.17	0.572	0.565
Within Groups	69.29	0.30		
Inter-sender RC				
Between Groups	0.33	0.16	0.221	0.802
Within Groups	169.08	0.74		
Inter-Role Conflict				
Between Groups	1.33	0.66	1.41	0.247
Within Groups	109.80	0.47		
Intra-Sender RC				
Between Groups	0.51	0.25	0.85	0.430
Within Groups	68.57	0.30		
Role Ambiguity				
Between Groups	0.58	0.29	0.37	0.693
Within Groups	181.00	0.79		
Role Incongruity				
Between Groups	1.39	0.69	1.29	0.277
Within Groups	123.58	0.54		
Role Incompetence				
Between Groups	1.06	0.53	1.40	0.249
Within Groups	87.07	0.38		

Table 19.

ANOVA Summary for School Affiliation on Role Incompetence

Source	df	SS	MS	F	p	η^2
Between Groups	6	5.639	0.940	2.544	0.021	0.050
Within Groups	243	89.763	0.369			

Table 20.

Means and Standard Deviations for Effects of School Affiliation on Role Incompetence

School	n	Mean	SD
Arts & Sciences	37	2.16	0.69
Allied Health/Medicine	32	1.90	0.50_a*
Education	48	2.06	0.54_b**
HPER	38	2.13	0.64
Professional Studies	8	2.10	0.81
Hybrids	26	1.89	0.68_c**
Not Applicable	61	2.32	$0.58_{a,b,c}$

Note: Subscripts indicate significant difference between groups
Note: * = $p<.05$; **, $p<.01$.

Table 21.

Means and Standard Deviation for Effects of Departmental Affiliation on Total Role Strain and Subscale Scores.

Department	n	Mean	SD
Kinesiology	173	$2.61_{a,}$	.55
Health Sciences	20	2.66_{b}	.57
Natural Sciences	7	$1.91_{a,b,c,d}$	.55
Education	20	2.78_{c}	.58
At Only	26	2.45_{d}	.50

Note: Subscripts indicate significant difference between groups

Table 22.

Means and Standard Deviation for Effects of Departmental Affiliation on Role Overload.

Department	n	Mean	SD
Kinesiology	173	$3.13_{a,b}$	0.75
Health Sciences	20	3.26_{c}	0.63
Natural Sciences	7	$2.27_{a,c,d}$	0.92
Education	20	$3.51_{b,d,e}$	0.91
At Only	26	2.89_{e}	0.75

Note: Subscripts indicate significant difference between groups

Table 23.

Means and Standard Deviation for Effects of Departmental Affiliation on Intra-Sender Role Conflict.

Department	n	Mean	SD
Kinesiology	173	$2.74_{a,b}$	0.54
Health Sciences	20	2.76_{c}	0.59
Natural Sciences	7	$2.23_{a,c}$	0.40
Education	20	$3.00_{b,d}$	0.53
At Only	26	2.57_{d}	0.51

Note: Subscripts indicate significant difference between groups

Table 24.

Means and Standard Deviation for Effects of Departmental Affiliation on Inter-Sender Role Conflict.

Department	n	Mean	± SD
Kinesiology	173	2.84_{a}	0.83
Health Sciences	20	2.93_{b}	0.90
Natural Sciences	7	$1.86_{a,b,c,d}$	0.89
Education	20	2.90_{c}	0.93
At Only	26	2.65_{d}	0.78

Note: Subscripts indicate significant difference between groups

Table 25.

Means and Standard Deviation for Effects of Departmental Affiliation on Global Role Conflict.

Department	n	Mean	SD
Kinesiology	173	2.60_{a}	0.55
Health Sciences	20	2.65_{b}	0.56
Natural Sciences	7	$1.99_{a,b,c,d}$	0.51
Education	20	2.73_{c}	0.59
At Only	26	2.47_{d}	0.49

Note: Subscripts indicate significant difference between groups

Table 26.

Means and Standard Deviation for Effects of Departmental Affiliation on Role Incompetence.

Department	n	Mean	SD
Kinesiology	173	2.17_{a}	0.61
Health Sciences	20	1.97_{b}	0.65
Natural Sciences	7	$1.36_{a,b,c,d}$	0.53
Education	20	2.20_{c}	0.52
At Only	26	1.99_{d}	0.62

Note: Subscripts indicate significant difference between groups

Table 27.

ANOVA Summary for Ideal Role Orientation on Total Role Strain and Subscale Scores.

Variable Source	SS	MS	F (5, 237)	p
Total Role Strain				
Between Groups	2.288	0.48	1.56	0.160
Within Groups	72.91	0.31		
Role Overload				
Between Groups	3.80	0.63	1.05	0.391
Within Groups	142.36	0.60		
Role Conflict (RC)				
Between Groups	4.38	0.73	2.57	0.020
Within Groups	67.33	0.284		
Inter-sender RC				
Between Groups	5.71	0.95	1.33	0.245
Within Groups	169.86	0.72		
Inter-Role Conflict				
Between Groups	8.41	1.40	3.172	0.005
Within Groups	104.71	0.44		
Intra-Sender RC				
Between Groups	2.58	0.43	1.50	0.179
Within Groups	67.85	0.29		
Role Ambiguity				
Between Groups	1.49	0.25	0.31	0.930
Within Groups	187.28	0.79		
Role Incongruity				
Between Groups	7.57	1.26	2.33	0.033
Within Groups				
Role Incompetence				
Between Groups	0.922	0.73	2.57	0.020
Within Groups	67.33	0.284		

Table 28.

ANOVA Summary for Ideal-Professional Congruency on Academic Role Strain Scores.

Variable Source	SS	MS	F(1,248)	p
Total Role Strain				
Between Groups	.265	.265	.335	.563
Within Groups	196.235	.791		
Role Overload				
Between Groups	.289	.289	.479	.490
Within Groups	149.953	.605		
Inter-Role Conflict				
Between Groups	.126	.126	.257	.613
Within Groups	121.410	.490		
Intra-Sender RC				
Between Groups	.019	.019	.063	.803
Within Groups	73.645	.297		
Role Incongruity				
Between Groups	.247	.247	.445	.505
Within Groups	137.911	.556		
Inter-Sender RC				
Between Groups	.009	.009	.013	.910
Within Groups	179.205	.723		
Role Ambiguity				
Between Groups	.097	.097	.125	.724
Within Groups	192.921	.778		
Role Incompetence				
Between Groups	.210	.210	.546	.461
Within Groups	95.193	.384		
Global Role Conflict				
Between Groups	.013	.013	.043	.836
Within Groups	75.597	.305		

Table 29.

ANOVA Summary Ideal-Role Model Congruency on Academic Role Strain Scores.

Variable Source	SS	MS	F (1,248)	p
Total Role Strain				
Between Groups	0.13	0.13	0.414	0.521
Within Groups	78.17	0.32		
Role Overload				
Between Groups	0.68	0.68	1.12	0.291
Within Groups	149.57	0.60		
Role Conflict (RC)				
Between Groups	0.046	0.05	0.150	0.699
Within Groups	75.57	0.31		
Inter-sender RC				
Between Groups	0.27	0.27	0.372	0.542
Within Groups	178.95	0.72		
Inter-Role Conflict				
Between Groups	0.82	0.82	1.68	0.196
Within Groups	120.72	0.49		
Intra-Sender RC				
Between Groups	0.07	0.07	0.237	0.627
Within Groups	73.59	0.30		
Role Ambiguity				
Between Groups	0.003	0.003	0.004	0.951
Within Groups	193.02	0.78		
Role Incongruity				
Between Groups	0.11	0.11	0.199	0.656
Within Groups	138.05	0.56		
Role Incompetence				
Between Groups	0.34	0.34	0.925	0.337
Within Groups	95.05	0.38		